

PUBLIC WORKS DEPARTMENT

WATER RESOURCES DEPARTMENT

CHENNAI REGION

TAMILNADU IRRIGATED AGRICULTURE MODERNIZATION PROJECT (TNIAMP)

PHASE– III

GUMMIDIPOONDI SUB BASIN

DETAILED PROJECT REPORT

Volume II

ESTIMATE AMOUNT Rs.754.00 LAKHS.
AYACUT 1672.03 Ha.

CHENNAI REGION, CHENNAI,

PALAR BASIN CIRCLE, CHENNAI,

ARANIYAR BASIN DIVISION, CHEPAUK,CHENNAI-5.

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1.7 CONCLUSION

1.7. Conclusion

In Gummidipoondi sub basin there are 40 Non system Tanks with an ayacut of 3060.72 Ha in which 18 tanks has been already executed under Kudimaramathu and RAFworks and remaining 22 tanks to be taken up for Rehabilitation and Modernisation under TNIAMP Phase III. In gummidipoondi sub basin there are 4 Anicuts with an ayacut of 293.02 Ha to be taken up for Rehabilitation and Modernisation under TNIAMP Phase III. In Gummidipoondi sub basin there are 40 tanks with supply channel length of 53 km out of which desilting and sectioning is required for a Length about 27 Km is now proposed. In Gummudipoondi sub basin Four Anicuts with supply channel length of 18km out of which desilting and sectioning is required for a length of 14 km. .

Based on the Norms and Guidelines as specified by Mr. R.K. Malhotra, World Bank Consultant , the Detailed Project Report has been Prepared including Provision for WRD Cost Provision for GST 12% , On form Development works , Labour Welfare Fund @ 1% , Lump Sum Provision at 2.5% (For Petty supervision Charges, Charges for Contingencies and Un foreseen Items , advertisement Charges , Photographic Charges and Documentation Charges) , Environmental Component. The Detailed Project Report prepared Based on the Current Schedule of Rate for the Year 2020-21 Pertaining to the Tiruvallur District for an Amount of Rs 754.00 Lakh.

The Proposed Rehabilitation of 22 tanks and Four Anicuts in TNIAMP –Phase III, will surely help to bridge the Gap between the future Projected water demand of irrigation and the water Potential available in the Sub Basin. The Rehabilitation of Irrigation Infra structure will certainly increase the Agriculture Productivity and also more ayacut areas will be stabilised and irrigated by conjunctive use of both Surface and Ground Water

The Expenditure of the above work will be Charged to the Head of Account “4701-Major Works” PHASE III TNIAMP Project.

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COMPLIANCE REPORT

Sl.No	Review Comments	Reply
I	The GUMMIDIPOONDI Sub Basin envisages rehabilitation & modernization of 22 Tank Bunds, re-construction of 10 Sluices, repairs to 13 Weirs, repairs to 4 Anicuts, improvements to 27 Km Tank Supply Channels and improvements to 14 Km Anicut Supply Channels besides execution of OFD works. Provision for Environmental Component is also made.	
2(i)	**(i)Rehabilitation & Modernization of 22 Tank Bunds (Rs 283.23 Lakhs).** Perusal of 6.4. Tank Details on Page 76 of DPR indicates that the maximum height of all the 22 Tank Bunds is less than 5.0 m. Accordingly, since the maximum height of Tank Bunds is less than 5.0 m, in terms of Indian Standard IS: 12169-1987, except for the soils of classification GW (Well Graded Gravel), GP (Poorly Graded Gravel), SW (Well Graded Sand) & SP (Poorly Graded Sand), any soil from amongst the soils of classification GC, GM, SC, SM, CL, ML, CI, MI, CH, MH can be used as earth fill for raising & strengthening of tank bunds through placement & compaction of earth fill duly keeping the side slopes (both upstream & downstream) of 2 (H): 1(V). The side slopes to be adopted for the Tank Bunds of height above 5.0 m are governed by the type of soil used. Since no Tank Bund is of height more than 5.0 m, field engineers have not got the soil classification tests of the borrow soils done for any of the Tank Bund. It is, however advisable, that well prior to the commencement of work, soil classification tests should be got done for the borrow soils to be used in the respective tank bunds for bringing these to the design section. This is needed to ensure that borrow soils of classification GW,	As per suggestion, soil classification test will be carried out before commencement of works and suitable soil will be used for tank bund. The water side slope and rear side slope for strengthening of bund is taken as 2(H) : 1(V). The additional quantity of earth work for strengthening of bund is 12870.00 M^3 for an amount of Rs.1170655.20 Necessary corrections involving above in cost is done and enclosed in DPR volume-II Page No:- 20

	GP, SW, SP are not used since these soils are not suitable for homogeneous sections and are suitable for casing zone in the zoned tank bunds.since these soils are not suitable for homogeneous sections and are suitable for casing zone in the zoned tank bunds.	
2 (ii)	**(ii)Cross Sections of Tank Bunds.** It is noted that Cross sections of none of the 22 Tank Bunds proposed to be standardized are appended in the DPR. In order to be sure and check that correct quantities of earth fill are calculated and included in the estimate, it is essential to fulfill this requirement. In this context, cross sections of existing profiles of all 22 tank Bunds at each spacing, as actually observed, duly super imposed with the design section & depicting benches / serrations cut in the existing profiles, should be appended in a separate volume, titled: DPR, Vol.II. Relevant features, such as, FTL, MWL, TBL & side sloes should be shown in the Cross sections. The DPR is not considered to be complete without fulfillment of this requirement. MDPU to ensure compliance and also check whether the quantity of earth fill taken in B.O.Q. for placement & compaction to bring 22 Tank Bunds to design section is correct based on the plotted Cross Sections.	22 tank bunds at the spacing at 100m interval which actually observed, and duly superimposed with the proposed design section as well as the statement depicting the quantities of " cut ' (serrations/benches cut in the side slopes) & "fill" have been included in a separate volume, marked volume II DPR. MWL, TBL, side slopes, benches have been duly depicted in each cross section.
2(iii)	**(iii)Free Board.** It is satisfying to note, through perusal of section 6.4. Tank details, Pages 76-77 that provision for increasing the free board to 1.50 m (for the tanks of max. height above 3.0 m) and increasing the free board to 1.25 m(for the tanks of max. height up to 3.0 m) has now been made. (Vanamalli Tank being of	As per suggestion the free Board of vanamalli tank has been changed to 1.25 m and appended in Page no:11 of DPR Volume II .

	only 3.02 m height, free board of 1.25 may be kept).	
2(iv)	**(iv) Turfing on Rear (Downstream) Slopes of Tank Bunds.** It is satisfying to note through perusal of item at Sl. No. 22 in B.O.Q., Page 99, that provision for "turfing" is made, there by, satisfying the requirement of technical guidelines. Note: Unit of "turfing" given in M3 is not correct. It should be in M2... Likewise, quantity given in M3 is not correct. It should be in M2 . Necessary corrections should be made.	Necessary corrections has been made for the unit of turfing from M^3 to M^2 and quantity mentioned has been checked and revised sheets are appended in page no :33 of DPR Volume II
2(v)	**(v) Re-construction of 10 Sluices (Rs. 71.59 Lakhs).** Re-construction of Sluices being based on the design / drawings issued by Central Design Organization (CDO), enclosed in the DPR, provision made for this work is considered to be O.K.	--
2 (vi)	**(vi) Repairs to 13 Weirs (Rs. 90.04 Lakhs).** Sketches of typical sections of Weir, enclosed in pages 157 – 159 of DPR, imply that methodology of providing 'concrete skin wall' is contemplated besides some other repairs. In order to ensure clarity, it is suggested that clear dimensioned Sketches / Drawings of at least 3 Nos. actual Weirs indicating complete 'concrete skin wall' features & other contemplated repairs should be appended along with a brief Note outlining the proposed repairs. Presently, only 'general sketches' of concrete skin wall are appended. Also, our review comments given in Paragraph 5 in respect of the repairs of Weirs in the NAMBIYAR Sub Basin be referred.	Sketch of The actual weir - 3 Nos with a brief note are enclosed in Page no:- 35, 40-43 of DPR Volume II. Also, Concrete Skinwall notes are included as per mentioned in the Nambiyar sub basin review comments are also given in the sketch.

3	**Repairs to 4 Anicuts (Rs. 97.97 Lakhs).** Very sketch information is provided in respect of the contemplated repairs of 4 Anicuts and, consequently, no purposeful review can be undertaken. Perusal of Sketches of Anicuts enclosed in Pages 161 to 164 in Chapter 9: Drawings indicate provision of 'skin wall' & some other type of repairs in the Panajali Anicut; other type of repairs in Sanaputhur Anicut (without skin wall); other type of repairs in Ralakalvai Anicut (without skin wall) and provision of 'skin wall' & some other type of repairs in Sedilpkkam Anicut. The Sketches do not serve any purpose since the types of proposed repairs are not illustrated / indicated. Neither any dimensioned drawings / sketches of actual weirs incorporating concrete skin walls are appended. Presently, every thing is sketchy. Repairs to 4 Anicuts constitute an important work component costing Rs 97.97 Lakhs and the contemplated repairs should be properly explained duly backed with dimensioned sketches / drawings fully illustrating the repairs.	Details of anicut has been explained in a paragraph separately and respective drawings with proper dimensions are enclosed in page no:- 36-39,44- 55 of DPR Volume II.
	It is accordingly suggested that dimensioned sketches of all 4 Anicuts incorporating proposed repairs along with an explanatory paragraph should be appended in the DPR.	
4	**Improvements to Tank Supply Channels - 27 Km (Rs. 30.19 Lakhs) & Improvements to Anicut Supply Channels -14 Km (Rs. 40.31 Lakhs).** No details, what so ever, about the contemplated improvements to be carried out in these Channels are given in the DPR. A one line indication is given in Section 1.7. Conclusion, Page 17, that "sectioning is required in these	Entire supply channel portion are to be desilted and sectioned Properly and the typical / dimensional sections of supply channel are appended in DPR PlanVolume II.

	Channels". It needs to be indicated whether provision of only "re-sectioning" of these Channels is made in the estimate or it includes other improvements also. Furthermore, no typical sections of these Channels illustrating their existing profile superimposed with design /re-sectioned profile /section are appended. The functional reliability and conveyance efficiency of Supply Channels being of vital importance, the contemplated improvements should ensure fulfillment of these requirements. It is accordingly suggested that the proposed repairs / improvements should be explained and duly illustrated. In respect of the re-sectioning of the Channels, typical dimensioned sections of these Channels indicating existing profile superimposed with design profile should be appended. In case, any retaining wall / walls and other structure / structures are planned in any reach of these Channels, sketch / sketches there-of should also be appended.	
5	**OFD Works: 6.7. WRD COST TABLE. Page 84.** Provision of Rs. 35.86 Lakhs for OFD works is made in the Cost Table based on Rs 2144/Ha. This is not correct. Provision of Rs 36.78 Lakhs should be made based on 2200/Ha. No unilateral reduction should be made in this important component, being very important for enhancing the conveyance efficiency of water in the distribution system. Rather, any additional provision, wherever possible, should be attempted for this component and no reduction, what so ever & how so ever small, be made. Necessary correction should, therefore, be made .	OFD costs has been corrected and increased from 35.86 lakhs to 36.78 lakhs based on Rs 2200/ Ha as instructed and appended in page No:-17 of DPR Volume II

6	**IMPORTANT NOTE. Adequacy of Existing Weirs.** As per Section 6.1, Page 74, GUMMIDIPOONDI SUB BASIN is reportedly a very old System existing for more than 60 years. It may be mentioned that the rainfall pattern might have changed during this long period. The phenomenon of "climate change" has occurred the world over causing heavy rains in many regions of the world. It shall, therefore, be desirable to compute revised design flood afresh for the Tank Systems in this sub basin and the adequacy of existing Weirs to safely negotiate the computed flood checked. In this connection reference be made of our comments outlined in Paragraph 7 above for the NAMBIYAR SUB BASIN and requisite action should be initiated by the Central Design Organization. Initially, this should be initiated for 13 Weirs, which are proposed to be repaired in the GUMMIDIPOONDI SUB BASIN.	Report on MFD calculation of 11 tanks have been calculated and enclosed in DPR volume-II Page no:- 61-71 SE(Designs) in the letter Date :-29.12.2020 has reported that the length of weir for the 11 tanks are found to be safe and sufficient to dispose discharge based on the rainfall intensity. Page No:-57 DPR Volume II SE, Designs in their letter dated :22.12.2020 has stated that the computation of revised Design Flood is prepared based on the rainfall intensity, catchment area and other hydraulic particulars furnished by the Executive Engineers Concerned.
7	**BILL OF QUANTITIES (BOQ).** **(i) Sl. No. 2. Page 87** In 9 th line, "breaking clods" be worded to read as: "breaking clods of size more than 75 mm". Also, in 14 th line, " + 0.90 m" should be worded to read as : " + 0.90 m". It implies that the roller width may be somewhat more than 0.90 m / somewhat less than 0.90m. **(ii) Sl. No. 3. Page 88.** This Item relates to the compaction of earth fill on the side slopes through deployment of 'rig mounted steel plate compactors'. The UNIT rate	The corrections mentioned have been rectified in the Bill of Quantities and now enclosed in i. Page No :20 ii.Page No : 21 iii.Page No : 22 of DPR Volume II

	of Rs 16.26 / M2 taken for this work is much more compared to the Unit rate assumed for this work in other sub basins. The Other Sub Basins have taken the Unit rate of about Rs 6 / M2 . Accordingly, this aspect should be examined by the concerned engineers and necessary action taken , as warranted. **(iii) Sl No. 6. Page 89.** This Item relates to "cut opening the tank bund". The Tank Bunds are cut opened in which the Sluices are to be re-constructed. The bunds are to be "cut opened in 4 (H):1(V) slope. Accordingly, the sentence: ".....cut opening the tank bund with initial lead....." should be re-worded to read as: "cut opening the tank bund in 4(H):1(V) slope with initial.....". In this sub basin, 10 Sluices are proposed to be reconstructed. Correctness of the quantity of earthwork (2245.15 M3) taken in this item for cut opening of 10 tank bunds in 4(H):1(V) slope should be checked.	

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1.7 CONCLUSION

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CHAPTER 6

REHABILITATION OF IRRIGATION INFRASTRUCTURES

6.4 TANK DETAILS WITH FREE BOARD PROVIDED

Sl. No	Name of the Tank	Maximum Height of Bund in m	Free Board		Length of Bund in m	Remarks
			Provided previously in m	Proposed now in m		
1	Amarambedu Parikkeri	2.37	0.92	1.25	755	
2	Amarambedu Tank	3.38	0.93	1.50	1060	
3	Amirthamangalam tank	2.97	0.92	1.25	1930	
4	Aramani Tank	3.99	0.96	1.50	540	
5	Budur Anicut Thangal	3.60	1.50	1.50	950	
6	Chinna Bommanjikulam Tank	4.13	0.98	1.50	690	
7	Kanalur Pedu Eri	3.03	0.860	1.50	1402	
8	Periya Bommanjikulam Tank	4.44	0.90	1.50	450	
9	Pondavakkam PuduTank	2.88	0.91	1.25	720	
10	Sedilpakkam Tank	2.44	0.92	1.25	725	
11	Edur Tank	2.21	0.31	1.25	1250	
12	Theryoy Kandigai Chitteri	4.38	0.99	1.50	1250	
13	Vanamalli Tank	3.02	0.90	1.25	1200	
14	Elavoor Hissa Kattu Thangal	2.92	0.92	1.25	1382	
15	Elavoor Katteri Tank	3.50	1.07	1.50	630	
16	Elavur Large Tank	3.67	0.92	1.50	1204	

17	Eguvarpalayam Odaperi	3.72	0.92	1.50	685
18	Narasingapuram Tank	3.91	0.92	1.50	640
19	Peria Natham Thattan Tank	3.06	1.07	1.50	381
20	Melapakkam Pettai Cheruvu	3.06	0.92	1.50	795
21	Poovalai Large Tank	4.97	1.00	1.50	1005
22	Thervali Thamarai Tank	4.70	0.91	1.50	457

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6.5 DETAILS OF PROPOSAL IN EACH INFRASTRUCTURE OF SUB BASIN – TANKS AND ANICUT SUPPLY CHANNEL

A) TANKS/anicut

Sl No	Name of tank/ Anicut	Bund				Sluice					Weir						Rehabilitation to Supply channel		Rehabilitation to kondam / Surplus Course		Total Amount in Lakhs	Remarks
		Rehabilitation to Bund		Model Section		Total No. of Sluice	Repairs to Sluice		Reconstruction of Sluice		Total No. of Weir	Length of Weir (m)	Repais to Weir		Reconstruction of Weir							
		Length in (m)	Amount in Lakhs	No	Amount in Lakhs		No	Amount in Lakhs	No	Amount in Lakhs			No	Amount in Lakhs	No	Amount in Lakhs	Length in km	Amount in Lakhs	Length in m	Amount in Lakhs		
1	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PACAKGE I																						
1	Amarambedu Parikkeri	755	10.09	1	0.96	3			1	6.46	1	14.0	1	5.38			1000	0.58			18.94	
2	Amarambedu Tank	1060	12.27	1	0.90	3					1	14.50					500	0.54			8.86	
3	Amirthamangalam tank	1930	25.27	2	1.40	2			1	8.75	2	15.30 36.00	1	8.27			1500	1.66			38.56	
4	Aramani Tank	540	7.82	1	0.7	2			1	6.10	1	32.60	1	9.11							30.75	
5	Budur Anicut Thangal	950	12.12	1	0.96	1					1	14.00	1	6.53			2000	4.00			19.97	
6	Chinna Bommanjikulam Tank	690	9.04	1	0.95	2			1	9.47	1	14.50	1	5.82			2000	1.36			24.13	
7	Kanalur Pedu Eri	1402	16.87	2	1.40	2					1	20.43					1500	1.71			17.12	
8	Periya Bommanjikulam Tank	450	6.03	1	0.92	2					1	13.60	1	6.01			1000	1.36			11.82	
9	Pondavakkam PuduTank	720	9.68	1	0.95	2			1	5.22	1	22.80					1000	1.36			18.81	

Sl. No	Name of cluster / Infrastructure / village	Bund				SLUICE					WEIR						Rehabilitation to Supply channel		Rehabilitation to kondam / Surplus Course		Total Amount in Lakhs	Re ma rks
		Rehabilitation to Bund		Model Section		Total No. of Sluice	Repairs to Sluice		Reconstruction of Sluice		Total No. of Weir	Length of Weir (m)	Repais to Weir		Reconstruction of Weir							
		Length in (m)	Amount in Lakhs	No	Amount in Lakhs		NOR	Amount in Lakhs	No	Amount in Lakhs			Nor	Amount in Lakhs	No	Amount in Lakhs	Length in (km)	Amount in Lakhs	Length in m	Amount in Lakhs		
1	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
10	Sedilpakkam Tank	725	9.91	1	0.95	1			1	7.60	2	26.80 16.20	2	9.35			1000	0.52			29.49	
11	Edur Tank	1250	16.75	1	0.90	2			1	5.81	1	14.00					1500	1.67			22.66	
12	Thervoy Kandigai Chitteri	1250	16.36	1	0.98	2					1	22.50					1000	1.20			16.15	
13	Vanamalli Tank	1200	15.65	1	0.80	1			1	8.77	1	18.00					500	0.52			23.25	
14	Elavoor Hissa Kattu Thangal	1382	17.55	1	0.90	2					1	22.90	1	7.14			2500	1.58			21.55	
15	Elavoor Katteri Tank	630	8.95	1	0.82	1					1	30.50									8.08	
16	Elavur Large Tank	1204	15.13	1	1.07	3					1	28.95					2500	1.58			15.56	
17	Eguvarpalayam Odaperi	685	9.85	1	0.99	1					2	83.80 24.30	2	19.73			3000	4.28			36.17	
18	Narasingapuram Tank	640	8.16	1	0.88	2					1	29.60					1000	1.34			9.46	
19	Peria Natham Thattan Tank	381	5.09	1	0.97	3			1	6.81	1	6.10					500	0.31			12.29	
20	Melapakkam Pettai Cheruvu	795	9.74	1	0.94	2			1	6.60	1	16.00					2500	4.10			17.42	
21	Poovalai Large Tank	1005	13.01	1	0.99	1					1	14.0	1	5.56			500	0.52			11.87	
22	Thervali Thamarai Tank	457	5.97	1	0.80	2					1	9.20	1	7.14							13.76	

Sl. No	Name of cluster / Infrastructure / village	Bund				SLUIC					WEIR						Rehabilitation to Supply channel		Rehabilitation to kondam / Surplus Course		Total Amount in Lakhs	Remarks
		Rehabilitation to Bund		Model Section		Total No. of Sluice	Repairs to Sluice		Reconstruction of Sluice		Total No. of Weir	Length of Weir (m)	Repais to Weir		Reconstruction of Weir		Length in (km)	Amount in Lakhs	Length in m	Amount in Lakhs		
		Length in (m)	Amount in Lakhs	No	Amount in Lakhs		NOR	Amount in Lakhs	No	Amount in Lakhs			Nor	Amount in Lakhs	No	Amount in Lakhs						
1	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	Tank toal	20101	261.31	25	21.13	39			10	71.59	25		13	90.04			27000	30.19			474.26	
	Anicut																					
	Panjalai Maduvu																3500	9.88	27.20	26.59	36.47	
	Ralakalvai																3500	9.88	31.20	23.45	33.33	
	Sanaputhur Maduvu																3500	9.88	27.20	19.01	28.89	
	Sethilpakkam																3500	10.67	17.80	28.92	39.59	
	Anicut Toal																14000	40.31		97.97	138.28	
	Grand Total																				612.54	
	Provision for GST @ 12% for Civil works																				73.50	
	Provision for Contingencies, Unforeseen items, Advertisement Charges, Documentation, Photographic Charges, Petty Supervision @ 2.50 %																				17.15	
	Provision for Labour Welfare Fund @ 1 %																				7.03	
	Provision for OFD works																				36.78	
	Provision for Environmental Component																				7.00	
																					754.00	

2/2/21

Assistant Engineer, PWD, WRD.,
Lakshmipuram Anicut section,
Kavaripettai

2/2/21

Assistant Executive Engineer, PWD, WRD.,
Araniyar Basin sub Division,
Ponneri

2/2/21

Executive Engineer, PWD, WRD.,
Araniyar Basin Division,
Chepauk, Chennai-5.

6.6 DETAILS OF PROPOSAL IN EACH INFRASTRUCTURE OF SUB BASIN – TANKS AND ANICUT ABSTRACT

Sl. No	For Rehabilitation Package No	Ayacut in Ha	No of tanks	Bund		Sluice Reconstruction		Repairs to Weir		Rehabilitation of Tank Supply channel		Anicut		Rehabilitation of Anicut Supply channel		Total in lakhs
				Length (m)	Amt in Lakhs	No	Amt in Lakhs	No	Amt in Lakhs	Length (km)	Amt in Lakhs	Nos	Amount	Length (KM)	Amount in Lakh	
1	Package No 1	1672.03	22	20101	282.44	10	71.59	13	90.04	27.00	30.19	4	97.97	14.00	40.31	612.54
2	Provision for GST @ 12%															73.50
3	Provision for Unforeseen items, advertisement chareges, Photographic Charge, documentation (2.5%)															17.15
4	Provision for Labour Welfare Fund (1%)															7.03
5	Provision for OFD works including field channel lining,measuring devices (Rs2200/Ha)															36.78
6	Provision for Environmental component															7.00
																754.00

2/2/21
Assistant Engineer, PWD, WRD.,
Lakshmipuram Anicut section,
Kavaripettai

2/2/21
Assistant Executive Engineer, PWD, WRD.,
Araniyar Basin sub Division,
Ponneri

2/2/21
Executive Engineer, PWD, WRD.,
Araniyar Basin Division,
Chepauk, Chennai-5.

6.7 WRD – COST TABLE
Ayacut = 1672.03 Ha

Sl. No	Description Of Work	Quantity (length/No.s)	Amount in Lakhs
1	Strengthening of Tank Bund	20101 m	282.44
2	Reconstruction of Sluice	10Nos	71.59
3	Repairs to Weir	13 Nos	90.04
4	Improvements to tank Supply Channel	27000 m	30.19
5	Repairs to Anicut / Kondam	4 Nos	97.97
6	Improvements to Anicut Supply Channel	14000m	40.31
		Total	612.54
7	Add GST @ 12 %		73.50
		Sub Total	**686.04**
8	Provision for Contingencies, Unforeseen items, Advertisement Charges, Documentation, Photographic Charges, Petty Supervision @ 2.50 %		17.15
9	Provision for Labour Welfare Fund @ 1 %		7.03
10	Provision for OFD works including Field channel lining Measuring devices		36.78
11	Provision for Environmental Component		7.00
		Grand Total	**754.00**

2/2/21
Assistant Engineer, PWD, WRD.,
Lakshmipuram Anicut section,
Kavaripettai

2/2/21
Assistant Executive Engineer, PWD, WRD.,
Araniyar Basin sub Division,
Ponneri

2/2/21
Executive Engineer, PWD, WRD
Araniyar Basin Division,
Chepauk, Chennai-5.

2/2/21
Superintending Engineer, PWD, WRD.,
Palar Basin Circle,
Chepauk, Chennai-5.

3/2/21
Chief Engineer, PWD, WRD.,
Chennai Region ,
Chepauk, Chennai-5.

3.2.2021

3/2

6.8 Details of Packages

6.8.1 Package Details

Package
No. I

Sl. No	Description Of Work	Quantity	Amount in Lakhs
1	Strengthening of Tank Bund	20101 m	282.44
2	Reconstruction of Sluice	10Nos	71.59
3	Repairs to Weir	13 Nos	90.04
4	Improvements to Tank Supply Channels	27000 m	30.19
5	Repairs to Anicut / Kondam	4 Nos	97.97
6	Improvements to Anicut Supply Channel	14000m	40.31
		Total	612.54
7	Add GST @ 12 %		73.50
		Sub Total	**686.04**
8	Provision for Contingencies, Unforeseen items, Advertisement Charges, Documentation, Photographic Charges, Petty Supervision @ 2.50 %		17.15
9	Provision for Labour Welfare Fund @ 1 %		7.03
10	Provision for OFD works		36.78
			747.00

2/2/21
Assistant Engineer, PWD, WRD.,
Lakshmipuram Anicut section,
Kavaripettai

2/2/21
Assistant Executive Engineer, PWD, WRD.,
Araniyar Basin sub Division,
Ponneri

2/2/21
Executive Engineer, PWD, WRD.,
Araniyar Basin Division,
Chepauk, Chennai-5.

TNIAM Project, Phase – III

Gummidipoondi Sub Basin

General Abstract

CLUSTER Nos	PACKAGE	CONTENT	AMOUNT (In Lakhs)
Cluster :1 & 2	PACKAGE No. I	Rehabilitation and Modernisation of 22 Tanks and 4 Anicut and its supply channels in Gummidipoondi Subbasin in Gummidipoondi Block and Taluk of Thiruvalur District.	**747.00**
		SUB TOTAL	**747.00**
		Environmental component	7.00
		TOTAL	**754.00**

Assistant Engineer, PWD, WRD.,
Lakshmipuram Anicut section,
Kavaripettai

Assistant Executive Engineer, PWD, WRD.,
Araniyar Basin sub Division,
Ponneri

Executive Engineer, PWD, WRD.,
Araniyar Basin Division,
Chepauk, Chennai-5.

6.8.2 BILL OF QUANTITIES			ARANIYAR BASIN DIVISION Chennai		
PACKAGE – I					
SPECIFICATIONS					
Sl.No.	**Description of works**	**Quantity**	**Unit**	**Rate in figures and words**	**Amount**
1	Clearing scrub jungle including removal of stumps roots and disposing of the same etc., complete as directed by the Engineer in Changes of works and as per the technical specification.	393540.07 M^2 (three lakh ninty three thousand five hundred and fourty point zero seven square meter only)	$1M^2$ (One Square metre)	4.25 (Rupees four point twenty five only)	1672545.29
2	Earth work in all soils and sub soils except hard rock requiring blasting, and conveying earth by deploying earth moving machineries and tippers for formation of bund with a lead of **0 to 100** m in layers of suitable thickness, depending upon type of compaction equipment deployed and not exceeding 23Cm thickness, benching of slopes prior to placement of earth fill including extra earth filling, breaking clods of size more than 75mm, watering to OMC (Optimum moisture content) and compaction of each layer to 95% of proctor Density through deployment of appropriate compaction equipment (8-10T power roller) Vibratory power roller of short width (±0.90m width drum) power roller or vibratory power roller ensuring compaction of designed bund section and also ensuring compaction of earth fill of side slopes through the deployment of hydraulic excavators with steel plate figures attached to their booms/heavy power rollers or vibratory power roller/fuel operated or electrically operated, vibratory plate compactors, capable of including 1.5 (Horizontal): 1 (Vertical slope including side slopes etc., complete as directed by the Engineer in Charge of works and as per the technical	206754.00 M^3 (two lakh six thousand seven hundred and fifty four cubic meter only)	$1M^3$ (One cubic metre)	90.96 (Rupees ninty point ninty six paisa only)	18806343.84

	specification.				
3	Earthwork Compaction side slopes of Tank Bund by using Rig mounted steel Plate Compactors to achieve designed bund slope etc complete as directed by the Engineer in charge of works and as per the Technical Specifications.	121794.59 M^2 (one lakh twenty one thousand seven hundred and ninety four point fifty nine square meter)	$1M^2$ (One Square metre)	Rs 6.00 (Rupees six only)	730767.54
4	Earth work deploying earth moving machinery for desilting channels, depositing the earth on banks for forming bund, well consolidated and dressed, including sectioning and jungle clearance (having width of 3M to 10M) etc., complete as directed by the Engineer in charge of works and as per the technical specification.	196500.00 M^3 (one lakh . Ninety six thousand five hundred cubic meter)	$1M^3$ (One cubic metre)	Rs 32.36 (rupees Thirty two point thirty six only)	6358740.00
5	Earth work in all soils and sub soils except hard rock requiring blasting, and conveying earth by deploying earth moving machineries and tippers for formation of bund with a lead of **0 to 100** m in layers of suitable thickness, depending upon type of compaction equipment deployed and not exceeding 23Cm thickness through deployment of appropriate compaction equipment (8-10T power roller) Vibratory power roller of short width (0.90m width drum) power roller or vibratory power roller ensuring compaction of designed bund section and also ensuring compaction of earth fill of side slopes through the deployment of hydraulic excavators with steel plate figures attached to their booms/heavy power rollers or vibratory power roller/fuel operated or electrically operated, vibratory plate compactors, capable of including 1.5 (Horizontal): 1 (Vertical slope including side slopes etc., complete as directed by the Engineer in Charge of works and as per the	16215M^3 (sixteen thousand two hundred and fifteen cubic meter)	$1M^3$ (One cubic metre)	Rs 47.44 (Rupees fourty seven point fourty four only)	769239.60

	technical specification.				
6	Earth work excavation for cut opening the tank bund in 4 (H) : 1(V) slope with initial lead of 10 (ten) metres and initial lift of 2 (two) metres in hard stiff clay, stiff black cotton, soil, hard red earth, shales, murrams, gravel, stoney earth and earth mixed with small sized boulders and hard gravelly soil etc., complete as directed by the Engineer in charge of works and as per the technical specifications	2245.15 M^3 (two thousand two hundred and fourty five point fifteen cubic meter)	$1M^3$ (One cubic metre)	Rs 84.70 (Rupees eizhty four point seventy paise only)	190164.20
7	Earth work excavation for foundation in all soils inclusive of refilling the sides of foundation, shoring, strutting and bailing out water wherever necessary, well rammed, consolidated and depositing the surplus earth in places as shown by the departmental officers with an initial lead of 10 (Ten) metres and initial lift of 2 (Two) metres and clearing, levelling the site etc., complete as directed by the Engineer in charge of works and as per the technical specifications.	1943.43 M3 (one thousand nine hundred and fourty three point fourty three cubic meter)	$1M^3$ (One cubic metre)	Rs 127.31 (Rupees one hundred and twenty seven point thirty one paisa only)	247418.07
8	Dismantling, clearing away and carefully stacking materials and without disturb nearby structure useful for reuse for any thickness of **Brick or Stone masonry** in cement mortar walls under 3 (Three) metres high etc., complete as directed by the Engineer in charge of wor4ks and as per the technical specification.	899.43 M^3 (eight hundred and ninety nine point fourty three cubic meter)	$1M^3$ (One cubic metre)	Rs 192.99 (Rupees one hundred and ninety two point ninety nine paisa only)	173580.99

9	Dismantling clearing away and carefully stacking the material useful for reuse for any thickness of **cut stone slab** etc., complete as directed by the Engineer-in- charge of works and as per the technical specifications.	283.92 M^3 (two hundred and eighty three point ninety two cubic meter)	$1M^3$ (One cubic metre)	Rs 323.35 (Rupees three hundred and twenty three point thrity five paisa only)	91805.53
10	Dismantling clearing away and carefully stacking the material useful for reuse for any thickness of **cement concrete** slab etc., complete as directed by the Engineer-in-charge of works and as per the technical specifications.	220.79 M^3 (two hundred and twenty point seventy nine cubic meter)	$1M^3$ (One cubic metre)	Rs 332.57 (Rupees three hundred and thirty two point fifty seven paisa only)	73428.13
11	Providing and placing in position of plain cement concrete of grade M 10 with well graded aggregates and the nominal maximum size of coarse aggregate of 20mm and downgrade to I.S specified grading and mixing in mechanically in approved mixer (to produce concrete of the specified characteristic strength of 10N/mm2 at 28 days) including dewatering the placement site bailing/pumping and by diverting wherever necessary laying the concrete in layers of not exceeding 15cm thick compacting finishing the surface with all leads and lifts watering, curing complete so as to attain the profile and strength specified in the drawing etc., complete as directed by the Engineer in charge of works and as per the technical specifications.	366.12 M^3 (three hundred and sixty six point twele cubic meter)	$1M^3$ (One cubic metre)	Rs 5891.57 (Rupees five thousand eight hundred and ninety one point fifty seven paisa only)	2157021.60

12	Providing and placing in position of Plain cement concrete of grade M 15 with well graded aggregates and the nominal maximum size of coarse aggregate of 40mm and 20mm in the ratio of 60:40 weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of the specified characteristic strength of 15N/mm2 at 28 days) including dewatering the placement site by bailing/pumping and by diverting wherever necessary laying the concrete in layers of not exceeding 15cm thick and in bays vibrating, compacting and finishing the surface with all leads and lifts, watering curing complete so as to attain the profile and strength specified in the approved drawing & specifications and **excluding the cost component of providing rigid and smooth centering** for soffits of concrete slab for plain surface including shuttering wherever necessary for various depths below ground level and various heights above ground level using MS sheets of size 90 x 60cm and BG 10 gauge stiffened with MS Angles of size 25 x 25 x 3mm laid over silver oak joist of size 7.50 x 5cm, spaced at op cm C/c and supported by casurina props of size 10 to 13cm dia, spaced at 75cm C/c etc., complete. as directed by the Engineer in charge of works and as per the technical specifications.				
a	Plain Cement concrete M 15 (Bed Concrete)	2.00 M^3 (two point zero cubic metre)	1M^3 (One cubic metre)	4854.45 (Rupees four thousand eight hundred and fifty four and fourty five Paise only)	9708.90
	Providing and placing in position of Plain cement concrete of grade M 15 with well graded aggregates and the nominal maximum size of coarse aggregate of 40mm and 20mm in the ratio of 60:40 weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of				

	the specified characteristic strength of 15N/mm2 at 28 days) including dewatering the placement site by bailing/pumping and by diverting wherever necessary laying the concrete in layers of not exceeding 15cm thick and in bays vibrating, compacting and finishing the surface with all leads and lifts, watering curing complete so as to attain the profile and strength specified in the approved drawing & specifications and **Including the cost component of providing rigid and smooth centering** for soffits of concrete slab for plain surface including shuttering wherever necessary for various depths below ground level and various heights above ground level using MS sheets of size 90 x 60cm and BG 10 gauge stiffened with MS Angles of size 25 x 25 x 3mm laid over silver oak joist of size 7.50 x 5cm, spaced at op cm C/c and supported by casurina props of size 10 to 13cm dia, spaced at 75cm C/c etc., complete as directed by the Engineer in charge of works and as per the technical specifications.				
b	Including Vertical Centering Height - 0 to 90 CM.	499.35 M^3 (four hundred and ninety nine point thirty five cubic meter)	$1M^3$ (One cubic metre)	6080.70 (Rupees six thousand and eighty point seventy Paise only)	3036397.54
c	Including Vertical Centering Height – 0.90 to 180 CM.	649.15 M^3 six hundred and fourty nine point fifteen cubic meter)	$1M^3$ (One cubic metre)	5829.10 (Rupees five thousand eight hundred and twenty nine point ten Paise only)	3783960.26

d	Including Vertical Centering Height – 1.80 to 300 CM.	969.85 M^3 (nine hundred and sixty nine point eighty five cubic meter	$1M^3$ (One cubic metre)	6043.26 (Rupees six thousand fourty three point twenty six Paise only)	5861055.71
e	Including curved Centering Height - 300 CM.-400cm	119.04 M^3 (one hundred and nineteen point zero four only	$1M^3$ (One cubic metre)	5993.49 (Rupees five thousand nine hundred and ninety three point fourty nine Paise only)	713465.04
13	Providing and placing in position of plain cement concrete of grade M 20 with well graded aggregates and the nominal maximum size of coarse aggregate of 20mm weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of the specified characteristic strength of 20N/mm2 at 28 days) including dewatering the placement site by bailing/pumping and by diverting wherever necessary laying the concrete in layers of not exceeding 15cm thick and in bays vibrating, compacting and finishing the surface with all leads and lifts, watering curing complete so as to attain the profile and strength specified in the approved drawing & specifications and **excluding the cost component of providing rigid and smooth centering** for soffits of reinforced cement concrete slab for plain surface including shuttering wherever necessary for various depths below ground level and various heights above ground level using MS sheets of size 90 x 60cm and BG 10 gauge stiffened with MS Angles of size 25 x 25 x2mm laid over silver oak joist of size 10 x 6.5cm, spaced at 90cm C/C and supported by casurina props of size 10 to 13cm diameter, spaced at 75cm C/C etc., complete as directed by the Engineer in charge of works and as per				

	the technical specifications 0 to 270m/300m.				
a	Plain Cement concrete M20, (Bed Concrete).	24.80 M^3 (twenty four point eizhty cubic meter	1M^3 (One cubic metre)	6366.85 (Rupees six thousand three hundred and sixty six point eizhty five Paise only)	157897.88

	Providing and placing in position of plain cement concrete of grade M 20 with well graded aggregates and the nominal maximum size of coarse aggregate of 20mm weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of the specified characteristic strength of 20N/mm2 at 28 days) including dewatering the placement site by bailing/pumping and by diverting wherever necessary laying the concrete in layers of not exceeding 15cm thick and in bays vibrating, compacting and finishing the surface with all leads and lifts, watering curing complete so as to attain the profile and strength specified in the approved drawing & specifications and **Including the cost component of providing rigid and smooth centering** for soffits of reinforced cement concrete slab for plain surface including shuttering wherever necessary for various depths below ground level and various heights above ground level using MS sheets of size 90 x 60cm and BG 10 gauge stiffened with MS Angles of size 25 x 25 x2mm laid over silver oak joist of size 10 x 6.5cm, spaced at 90cm C/C and supported by casurina props of size 10 to 13cm diameter, spaced at 75cm C/C etc., complete as directed by the Engineer in charge of works and as per the technical specifications 0 to 270m/300m.				
b	Including Vertical Centering Height - 0 to 90 CM.	285.70 M^3 (two hundred and eighty five point seventy cubic meter)	$1M^3$ (One cubic metre)	5817.72 (Rupees five thousand eight hundred and seventeen point seventy two Paise only)	1662122.60

c	Including Vertical Centering Height – 0.90 to 180 CM.	90.05 M^3 (ninety point zero five cubic meter)	1M^3 (One cubic metre)	7652.21 (Rupees seven thousand Six hundred and fifty two point twenty one Paise only)	689081.51
14	Providing and placing in position of Ready mixed cement concrete of grade M 25 with well graded aggregates and the nominal maximum size of coarse aggregate of 20mm weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of the specified characteristic strength of 25 N/mm2 at 28 days) including dewatering the placement site by bailing/pumping and by diverting wherever necessary laying the concrete in layers of not exceeding 15cm thick and in bays vibrating, compacting and finishing the surface with all leads and lifts, watering curing complete so as to attain the profile and strength specified in the approved drawing & specifications and **excluding the cost component of providing rigid and smooth centering** for soffits of reinforced cement concrete slab for plain surface including shuttering wherever necessary for various depths below ground level and various heights above ground level using MS sheets of size 90 x 60cm and BG 10 gauge stiffened with MS Angles of size 25 x 25 x2mm laid over silver oak joist of size 10 x 6.5cm, spaced at 90cm C/C and supported by casurina props of size 10 to 13cm dia, spaced at 75cm C/C etc., complete as directed by the Engineer in charge of works and as per the technical specifications 0 to 270m/300m.				
a	Plain Cement concrete M 25, (Bed Concrete).	22.20 M^3 (twenty two point twenty cubic meter)	1M^3 (One cubic metre)	8172.07 (Rupees eight thousand one hundred and seventy two point zero seven Paise only)	181419.96

	Providing and placing in position of Ready mixed cement concrete of grade M 25 with well graded aggregates and the nominal maximum size of coarse aggregate of 20mm weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of the specified characteristic strength of 25 N/mm2 at 28 days) including dewatering the placement site by bailing/pumping and by diverting wherever necessary laying the concrete in layers of not exceeding 15cm thick and in bays vibrating, compacting and finishing the surface with all leads and lifts, watering curing complete so as to attain the profile and strength specified in the approved drawing & specifications and **Including the cost component of providing rigid and smooth centering** for soffits of reinforced cement concrete slab for plain surface including shuttering wherever necessary for various depths below ground level and various heights above ground level using MS sheets of size 90 x 60cm and BG 10 gauge stiffened with MS Angles of size 25 x 25 x2mm laid over silver oak joist of size 10 x 6.5cm, spaced at 90cm C/C and supported by casurina props of size 10 to 13cm dia, spaced at 75cm C/C etc., complete as directed by the Engineer in charge of works and as per the technical specifications 0 to 270m/300m.				
b	Including Centering of Plain Surface .0-90cm	46.04 M^3 (fourty six point zero four cubic meter)	$1M^3$ (One cubic metre)	8510.90 (Rupees eight thousand five hundred and ten point ninety Paise only)	391841.83

c	Including Centering of Plain Surface 0.90 -180 cm	209.70 M^3 (two hundred and nine point seventy paise only)	1M^3 (One cubic metre)	7061.51 (Rupees Seven thousand and sixty one point fifty one Paise only)	1480798.64
15	Manufacturing and fixing of M15 concrete using 20mm ISS HBG stone Cement Concrete block of size 300X250X200mm including cost and conveyance of all materials to work site labour charges for fixing the same in position and handling charges for the same in position including all other incidental charges etc complete.	321.90 M^3 (three hundred and twenty one point ninety cubic meter)	1M^3 (One cubic metre)	5422.31 (Rupees five thousand four hundred and twenty two point thirty one Paise only)	1745441.58
16	Supplying demarcation of R.C.C precast post in Cement Concrete of grade M 25 with well graded aggregates and the nominal maximum size of coarse aggregate of size 20mm of size 0.20x0.20x1.45M and fixing the post 40cm depth below ground level, the post includes using 4 numbers of 10mm RTS main road to a length of 1.325M, using 8mm MS 10 numbers and strips with steel centering and painting the post with enamel paint to a height of 0.80M around the post etc., complete and conveying the post to the site of demarcation boundary such as tank bund and foreshore including earth work excavation for foundation in HSC having the base plain cement concrete of 10cm of grade M 10 with well graded aggregates and the nominal maximum size of coarse aggregate of 40mm, and the post embedded by using cement concrete of grade M 10 with well graded aggregates and the nominal maximum size of coarse aggregate of 20mm etc., complete as directed by the Engineer in charge of works and as per the technical specifications.	650 No (six hundred and fifty number Only)	1 No (One number only)	2017.89 (Rupees two thousand and seveteen point eighty nine Paise only)	1311628.50

17	Supplying, fabricating and placing in position of Ribbed tor steel grills for Reinforcement of RCC works including cost of steel and binding wire and labour charges for de-coiling, cutting, bending, tying the grills and laying in position etc., complete as directed by the Engineer in charge of works and as per the technical specifications.	693.87 Qtl (six hundred and ninetythree point eighty seven quintal only)	1 Qtl (One Quintal)	6818.85 (Rupees Six thousand eight hundred and eighteen point eighty five Paise only)	4731395.44
18	Refilling the excavated earth and watering to OMC (Optimum Moisture content) and compaction of each layer to 95% of proctor Density through deployment of appropriate compaction equipment (8-10T power roller) vibratory power roller of short width (0.90m width drum) power roller or vibratory power roller/fuel operated or electrically operated, vibratory plate compactors, ensuring compaction of designed bund section including side slopes etc., complete as directed by the Engineer in charge of works and as per the technical specifications.	2045.15 M^3 (two thousand fourty five point one five cubic metre)	$1M^3$ (One cubic metre)	119.35 (Rupees one hundred and nineteen point thrity five pasia only)	244088.65
19	Plastering in Cement mortar 1:4 [one of cement and four of sand by volume mixed mechanical in approved mixer] 20 mm thick including finishing, curing etc., as directed by Engineer-in-charge of the works.	2199.93 M^2 (two thousand one hundred and ninety nine point ninety three square metre)	$1M^2$ (One Square metre)	369.00 (Rupees Three hundred and sixty nine point zero Paise only)	811774.17
20	Providing and fixing best country wood plug with 50mm dia MS screw gearing rod 4m height support on 2 Nos. ISMB 125 RJ Joists of 3.50m length and guide beam 1 No. of the same size resting in turn of MS base plate of 50 X 30 mm size 6 mm thick with cast iron hexagonal head set and a collar plate of 300 X 300 X 6 mm thick fixed with necessary bolts and nuts and other fixture etc, complete complying with standard specifications and as directed by the departmental officers	12No (twelve number only)	1Nos (One number)	21621.97 (Rupees twenty one thousand six hundred and twenty one point ninety seven paise only)	259463.64

21	**Gravel backing for apron and revetment** of 15cm thick including the cost of grvel at site of work, ixing with water so as to form into stiff plastic balls and laying and finishing etc., complete as directed by the Engineer in charge of works and as per the technical specification.	267 M^3 (two hundred and sixty seven cubic meter)	$1M^3$ (One cubic metre)	1192.97 (Rupees one thousand one hundred and ninety two point ninety seven Paise only)	318522.99
22	Turfing on downstream side (Rear) slope on bund including waterinf and fixing with a initial upto 50m including cost of turf and labour charges etc complete as directed by the Engineer in charge of works as per the technical specification (S.R.Sl.No.82	77027.34 M^2 (seventy seven thousand and twenty seven point thrity four Square meter)	$1M^2$ (One Square metre)	30.60 (Rupees thirty point sixty Paise only)	2357036.60
23	Supplying and fixing cut stone fully dressed to size all faces and set in cement mortar 1:4 [one cement and four sand by volume mixed mechanically in approved mixer] including all incidental charges such as finishing and curing etc complying with technical specification and as directed by the Engineer in charge of works.	27 M^3 (twenty seven cubic meter)	$1M^3$ (One cubic metre)	6884.78 (Rupees six thousad eight hundred and eighty four point seventy eight Paise only)	185889.06
24	Fabricating , supplying and fixing of teak wood plug with screw gearing steel rod of 50mm diameter of 3.50m height and 150x75mm RS joist, beam 600mm 2Nos, with necessary base plate and fish plate and C.I head sets for operation of the screw gearing plug rod and necessary bolts and nuts etc., the wooden plug of conical shape of top 300mm and bottom 80mm dia and height 600mm. Top and bottom fixed with iron straps with iron plate of 50mm x6mm top of the wooden plug provided M.S. plate of 6mm thick for S.G. plug of tank sluice etc., comp[lete with required anchor rod and plate spanners etc, as directed by the Departmental officers including painting with and corrosive paint over one coat of red oxide, charges for civil works cost of construction	2No (two numbers only)	1no (One number)	25000 (Rupees twenty five thousand only)	50000.00

	materials and cost of rease and oil a d gearing arrangements etc., complying with technical specifications and as directed by the depaartmental officers.				
		Total			61254045.29

Assistant Engineer, PWD, WRD.,
Lakshmipuram Anicut section,
Kavaripettai

Assistant Executive Engineer, PWD, WRD.,
Araniyar Basin sub Division,
Ponneri

Executive Engineer, PWD, WRD.,
Araniyar Basin Division,
Chepauk, Chennai-5.

Superintending Engineer, PWD, WRD.,
Palar Basin Circle,
Chepauk, Chennai-5.

Chief Engineer, PWD, WRD.,
Chennai Region ,
Chepauk, Chennai-5.

9.5 List of tanks for Repairs of Weir :-

SI.NO	Name of tank	weir No.	Body wall Length	Proposed Work
1	Amarambedu Parikkeri	1	14.00	Providing Skinwall & Aprons, cutoff wall
2	Amirthamangalam Tank	1	15.30	Providing Skinwall & Aprons, cutoff wall
3	Aramani Tank	1	32.60	Providing Skinwall & Aprons, cutoff wall
4	Budhur Anicut Thangal	1	14.00	Providing Skinwall & Aprons, cutoff wall
5	Chinna Bommajikulam Tank	1	14.50	Providing Skinwall & Aprons, cutoff wall
6	Periya Bommanjikulam Tank	1	13.60	Providing Skinwall & Aprons, cutoff wall
7	Sethilpakkam Tank	2	26.80 & 16.20	Providing Skinwall & Aprons, cutoff wall
8	Elavoor Hissa kattu Thangal	1	22.90	Providing Skinwall & Aprons, cutoff wall
9	Eguvarpalayam Odaperi	2	83.80 & 24.30	Providing Skinwall & Aprons, cutoff wall
10	Poovalai large Tank	1	14.00	Providing Skinwall & Aprons, cutoff wall
11	Therivazhi Thamarai Tank	1	9.20	Providing Skinwall & Aprons, cutoff wall

2/2/21

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

2/2/21

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PANJALAI ANICUT

1. Name of the Anicut : Panjalai Anicut
2. Ayacut : 101.70 Ha
3. Length of the Anicut : 27.20 m
4. Supply channel details : Water supply to Poovalambedu tank, Amirthamangalam tank, Eguarpalayam tank.
5. Deficiency of the Anicut : Right side abutment, wingwall, Return and Bodywall.
6. Rehabilitation works Proposed : Skin wall for anicut Body wall(Left side), Right Side of Body wall,abutment, wing wall, return, apron, cutoff wall.
7. Estimate Cost : Rs.26.59 lakhs

Note : Only Repairs and Renovation works proposed. Hence there are no changes in the existing length, height and other hydraulic particulars of the Anicut.

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

RALAKALVAI ANICUT

1. Name of the Anicut : Ralakalvai Anicut

2. Ayacut : 50.17 Ha

3. Length of the Anicut : 36.70 m

4. Supply channel details : Water supply to Pondavakkam pudu tank, Madarpakkam tank, Manellur pudu tank.

5. Deficiency of the Anicut : Apron, cutoff wall, Body wall, Abutment, wing wall, Retrun.

6. Rehabilitation works Proposed : Skin wall for anicut Body wall, Abutment, Apron, wing wall, Return, cutoffwall.

7. Estimate Cost : Rs.23.45 lakhs

Note : Only Repairs and Renovation works proposed. Hence there are no changes in the existing length, height and other hydraulic particulars of the Anicut.

2/2/21

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

2/2/21

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

SETHILPAKKAM ANICUT

1. Name of the Anicut : Sethilpakkam Anicut

2. Ayacut : 60.70 Ha

3. Length of the Anicut : 17.80 m

4. Supply channel details : Water supply to Sedilpakkam tank.

   Manellur Large tank.

5. Deficiency of the Anicut : Apron, cutoff wall, Body wall,

   Abutment, wing wall, Return, Retaining wall.

6. Rehabilitation works Proposed : Skin wall for anicut Body wall, cutoff wall, Apron, wing wall, return, Abutment, Retaining wall.

7. Estimate Cost : Rs.28.92 lakhs

Note : Only Repairs and Renovation works proposed. Hence there are no changes in the existing length, height and other hydraulic particulars of the Anicut.

2/2/21

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

21/2/21

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

SANAPUTHUR ANICUT

1. Name of the Anicut : Sanaputhur Anicut
2. Ayacut : 27.20 Ha
3. Length of the Anicut : 31.20 m
4. Supply channel details : Water supply to Poovalambedu tank, Amirthamangalam tank, Eguarpalayam tank.
5. Deficiency of the Anicut : Abutment, wing wall, retrun, cutoffwall, Body wall.
6. Rehabilitation works Proposed : Skin wall for anicut Body wall, Abutment, wing wall, retrun wall, cutoff wall.
7. Estimate Cost : Rs.19.01 Lakhs

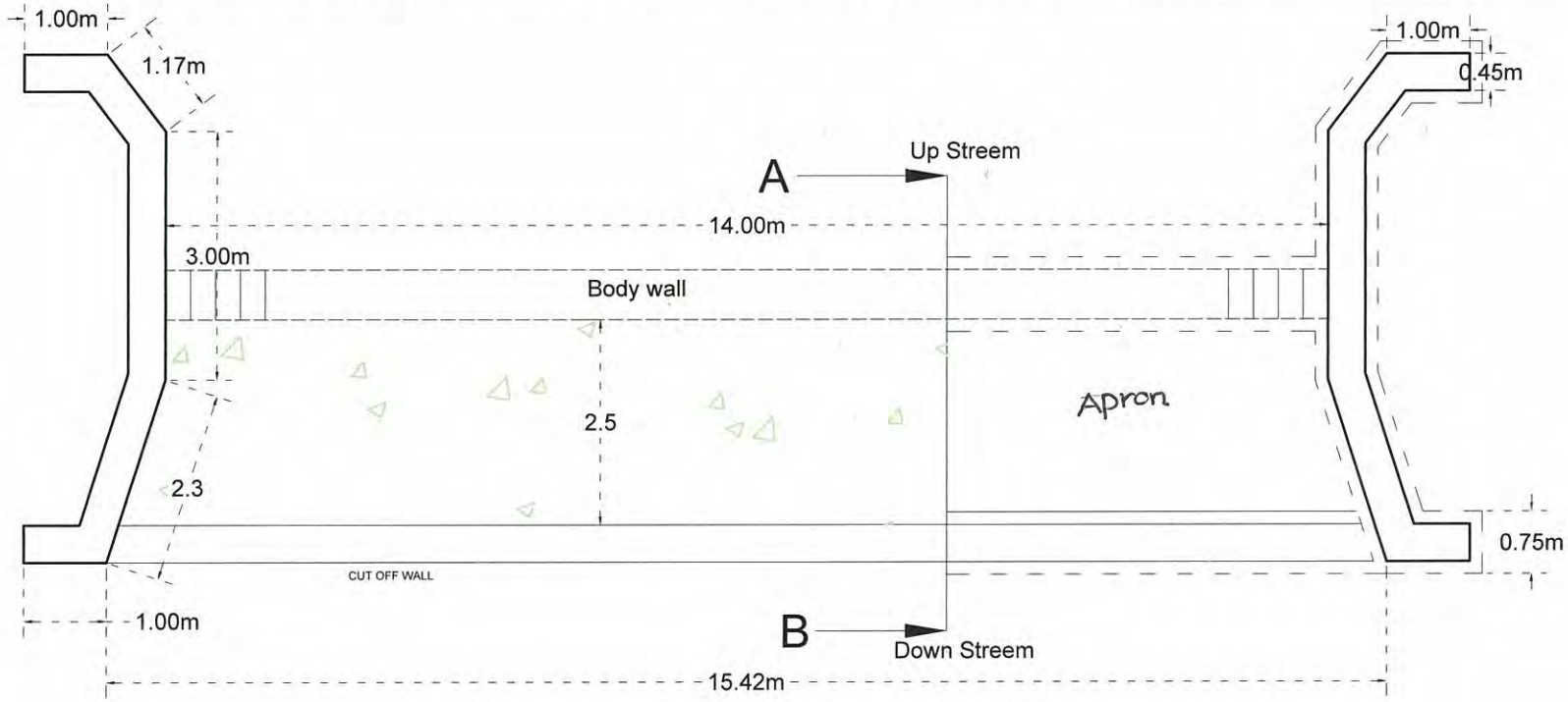
Note : Only Repairs and Renovation works proposed. Hence there are no changes in the existing length, height and other hydraulic particulars of the Anicut.

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

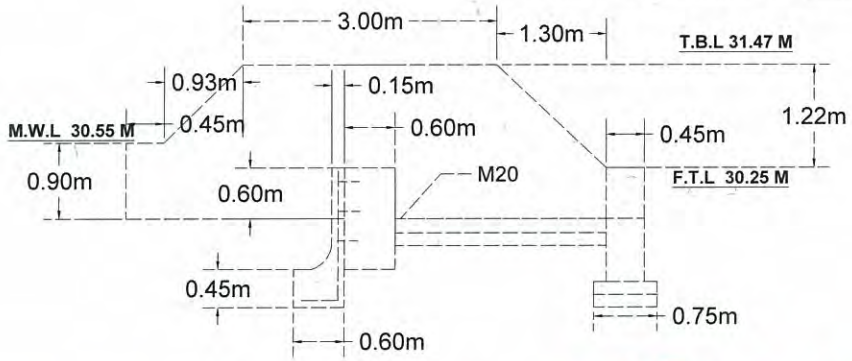
Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSD REPAIR OF WEIR IN AMARAMBEDU PARIKKERI TANK



HALF PLAN AT TOP AND BOTTOM



Proposed Repair to Apron, Cut-off Wall, Skin Wall

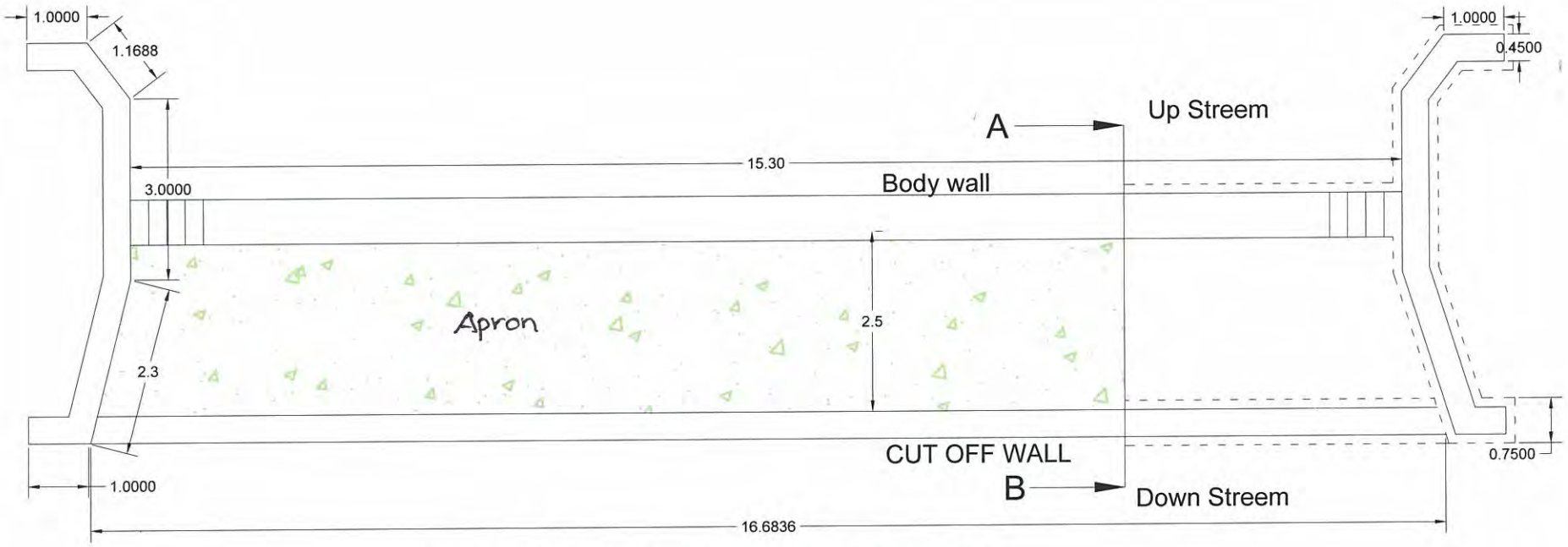
SECTION AT A-B

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,

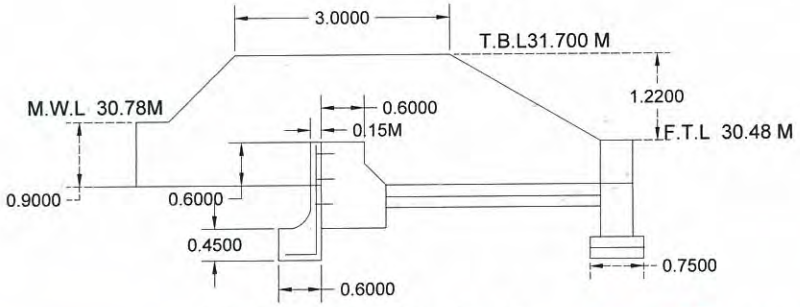
Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF WEIR IN AMIRTHAMANGALAM TANK



HALF PLAN AT TOP AND BOTTOM



SECTION AT A-B

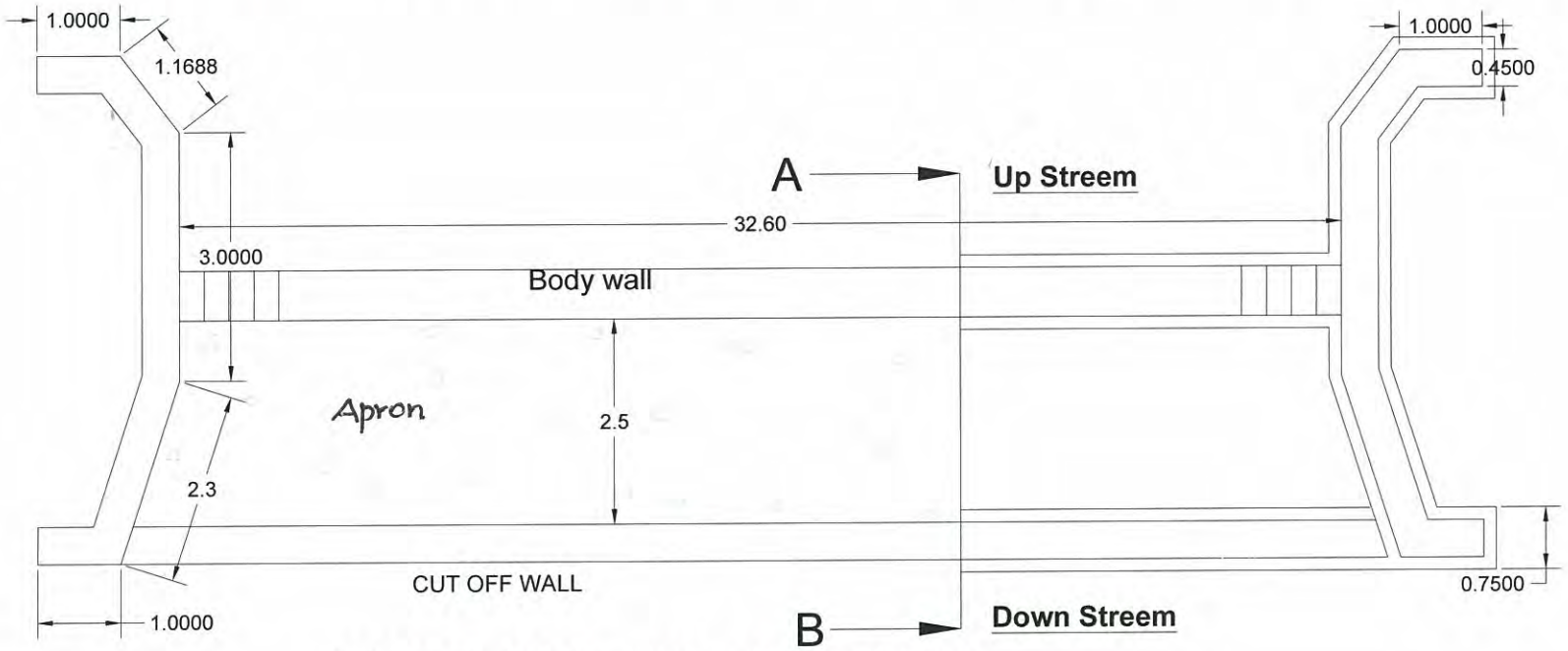
Proposed Repair to Apron, Cut-off Wall, Skin Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

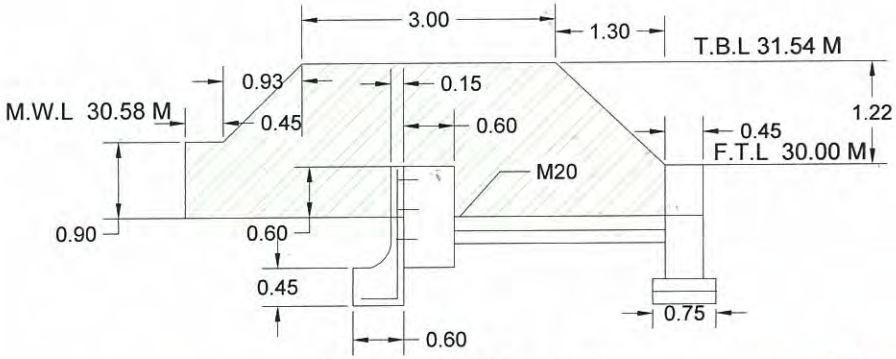
Assistant Executive Engineer PWD / WRD
Aranıyar Basın Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Aranıyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF WEIR IN ARAMANI TANK



HALF PLAN AT TOP AND BOTTOM



SECTION AT A-B

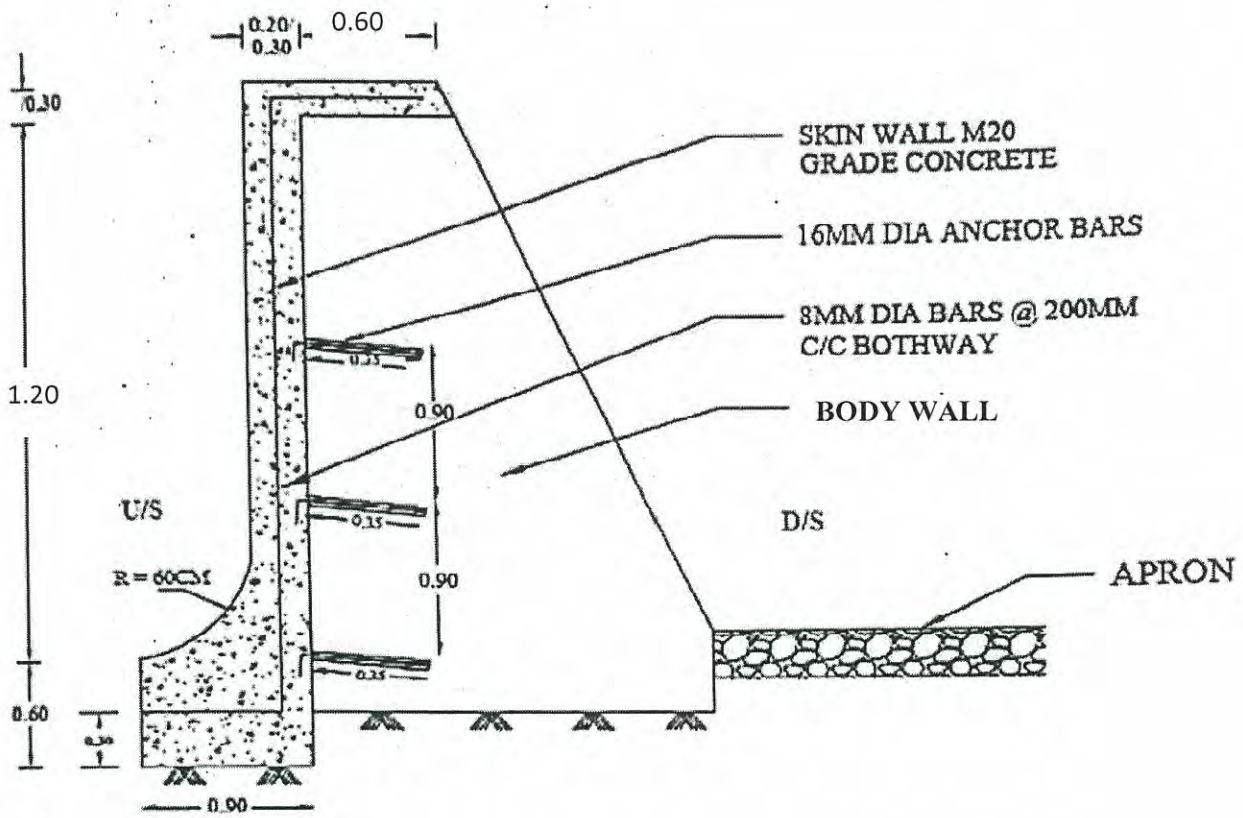
Proposed Repair to Apron,
Cut-off Wall, Skin Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kaveripattai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Aranivaru Basin Division,
Chepauk, Chennai-5.

Typical cross section of skin wall (Weir)



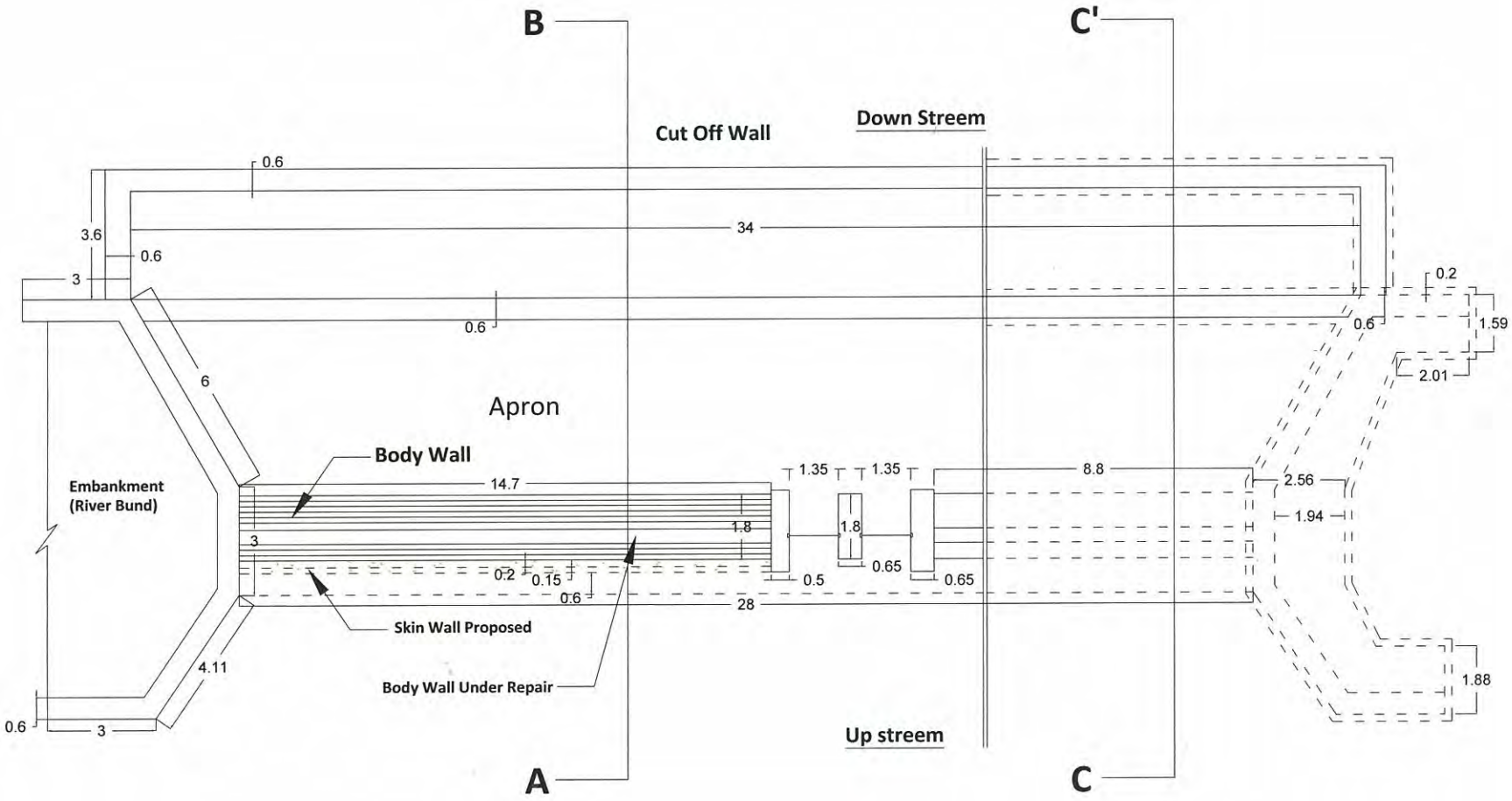
- Drill-holes of 50 mm diameter should be drilled at about 5 degree inclination downwards for ease of filling these holes with 1:2 cement-sand mortar.
- Joints on U/s surface to be raked to 25 mm depth, thoroughly cleaned and filled with mortar.
- Horizontal spacing, of Drill-holes (along the length of Weir) be kept at 1.0 m or as the decided by the Engineer-in-charges.
- Joints, exhibiting loose mortar and / hollow joints in the Downstream surface of weir should also be raked to 25 mm depth, thoroughly cleaned and filled with mortar.

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyar Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF PANJALAI ANICUT



HALF PLAN AT TOP AND BOTTOM

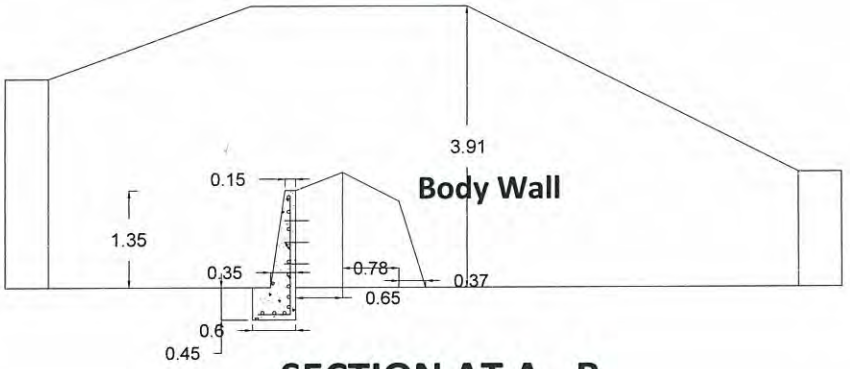
Proposed Repair to Right Side Abutment, Wings, Return, Apron, Skin Wall, Cutoff Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kaveraipettai - 601 206.

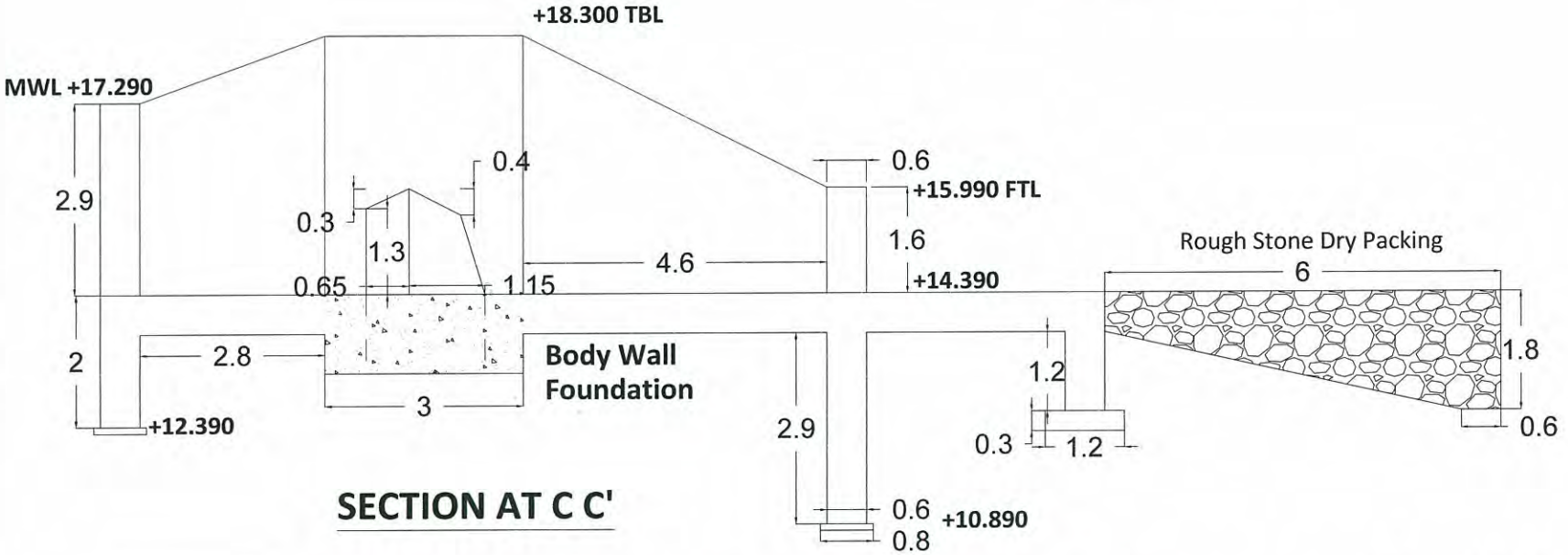
Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF PANJALAI ANICUT



SECTION AT A - B



SECTION AT C C'

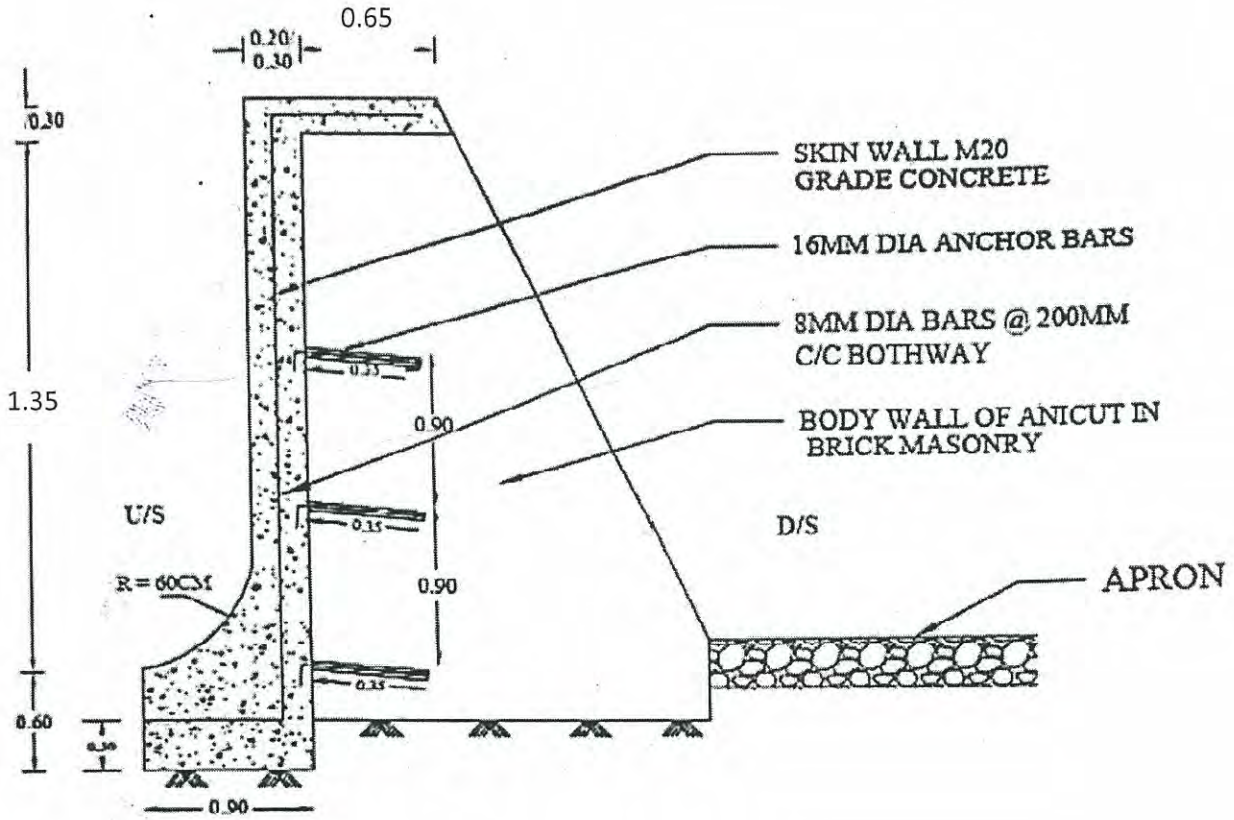
Proposed Repair to Right Side Abutment, Wings, Return, Apron Cutoff Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavarainettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

1. PANAJALAI ANICUT :-



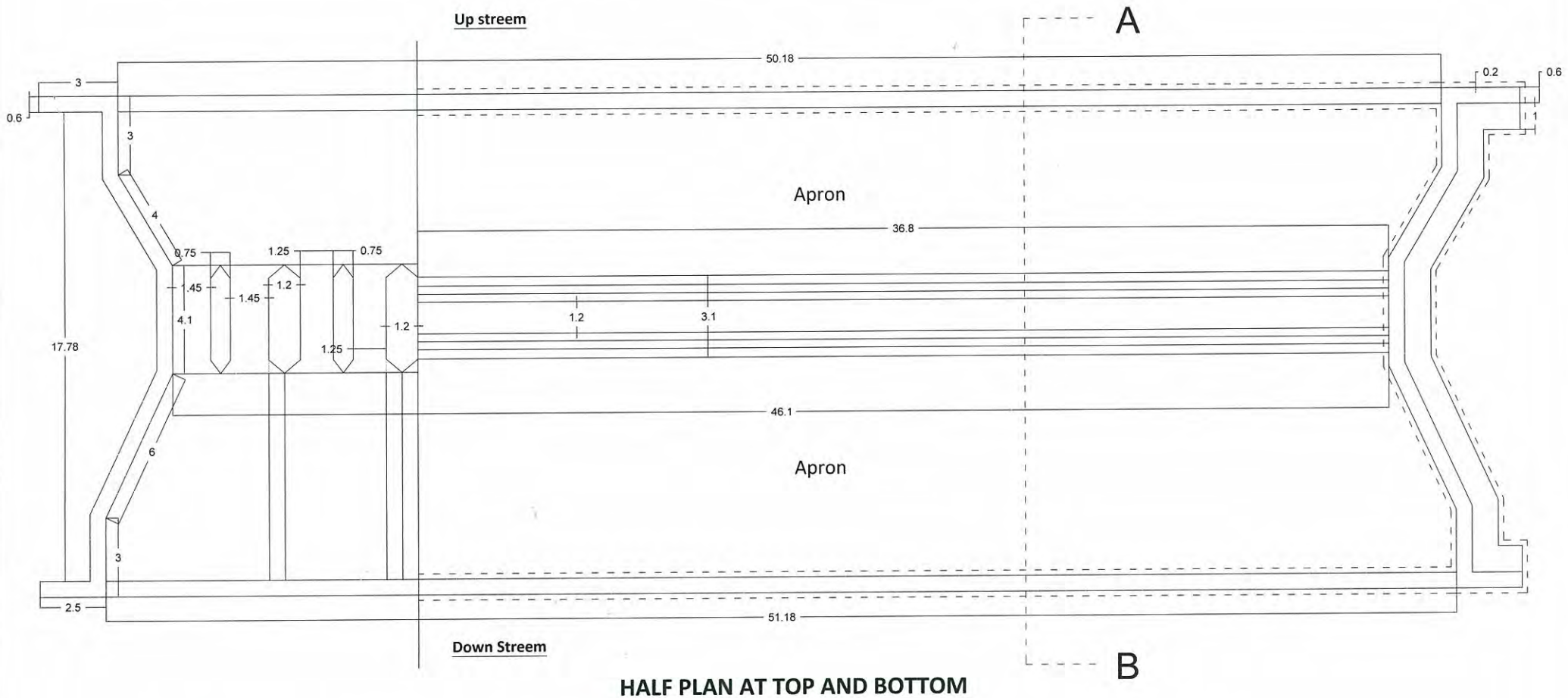
- Drill-holes of 50 mm diameter should be drilled at about 5 degree inclination downwards for ease of filling these holes with 1:2 cement-sand mortar.
- Joints on U/s surface to be raked to 25 mm depth, thoroughly cleaned and filled with mortar.
- Horizontal spacing, of Drill-holes (along the length of anicut) be kept at 1.0 m / 1.2 m.
- Joints, exhibiting loose mortar and / hollow joints in the Downstream surface of weir should also be raked to 25 mm depth, thoroughly cleaned and filled with mortar.

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF RALAKALVAI ANICUT



HALF PLAN AT TOP AND BOTTOM

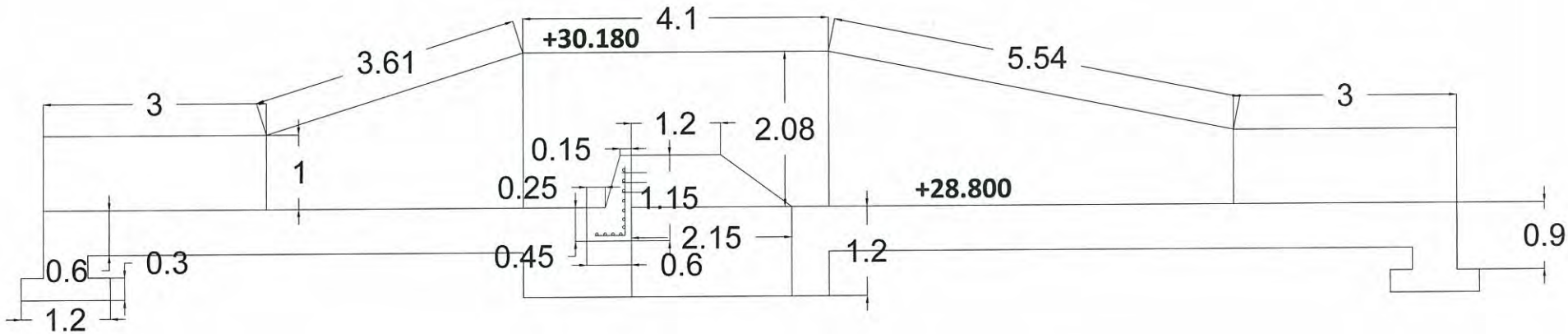
Proposed Repair to Abutment, Wings, Return, Apron, Skin Wall, Cutoff Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF RALAKALVAI ANICUT



SECTION AT A - B

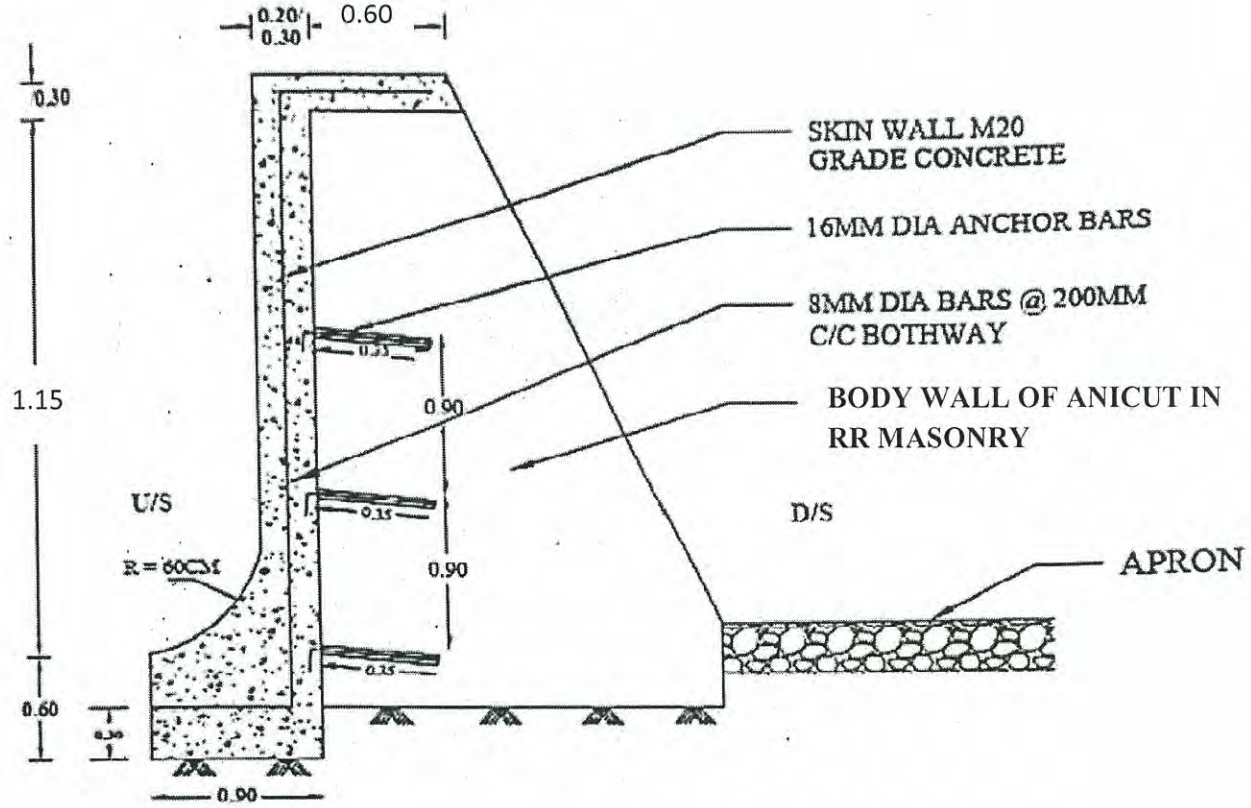
Proposed Repair to Abutment, Wings, Return, Apron,Skin Wall, Cutoff Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

2. RALAKALVAI ANICUT :-



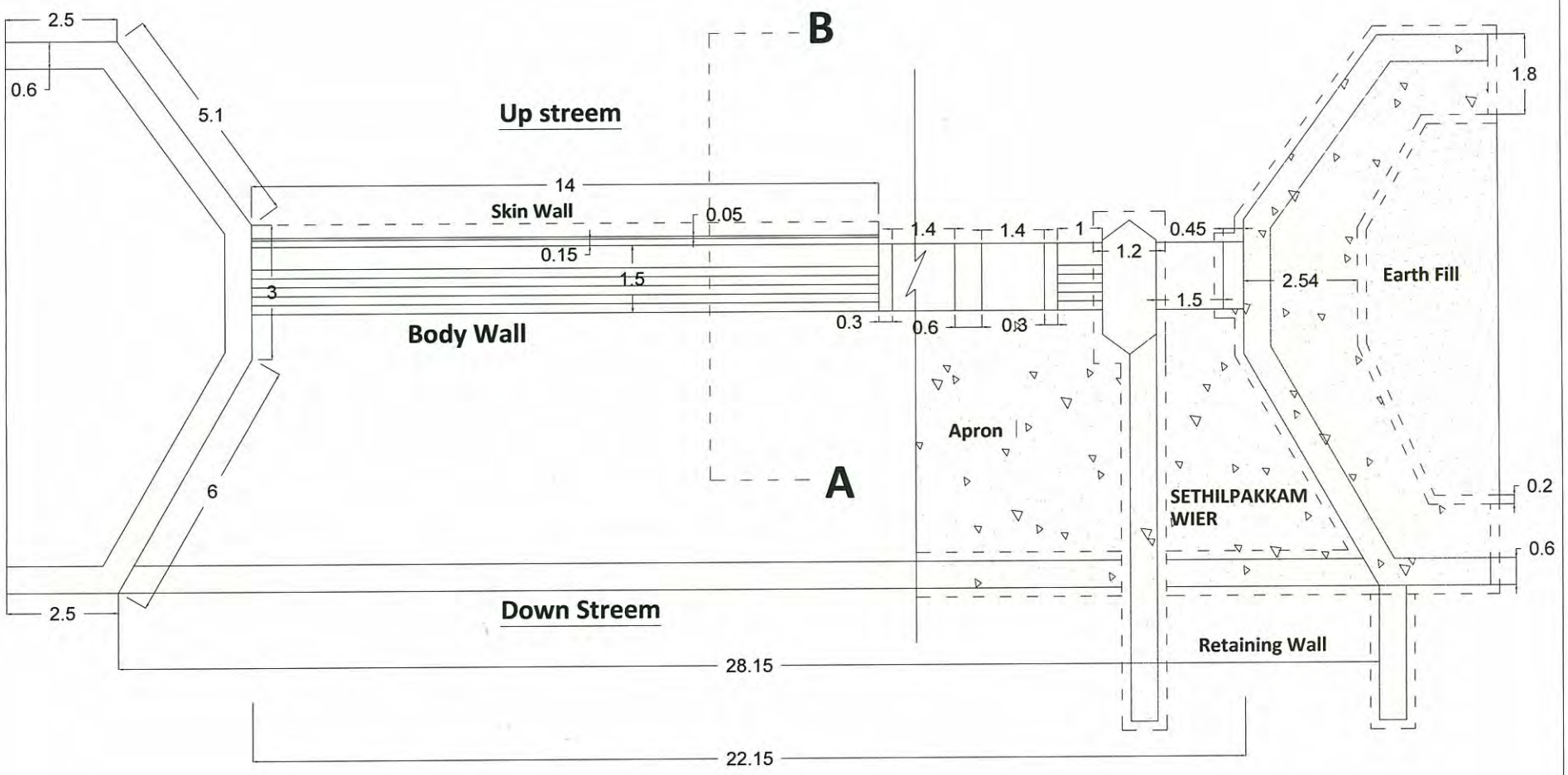
- Drill-holes of 50 mm diameter should be drilled at about 5 degree inclination downwards for ease of filling these holes with 1:2 cement-sand mortar.
- Joints on U/s surface to be raked to 25 mm depth, thoroughly cleaned and filled with mortar.
- Horizontal spacing, of Drill-holes (along the length of anicut) be kept at 1.0 m / 1.2 m.
- Joints, exhibiting loose mortar and / hollow joints in the Downstream surface of weir should also be raked to 25 mm depth, thoroughly cleaned and filled with mortar.

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer, PWD / WRD
Arc... Division
...601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF SETHILPAKKAM ANICUT



HALF PLAN AT TOP AND BOTTOM

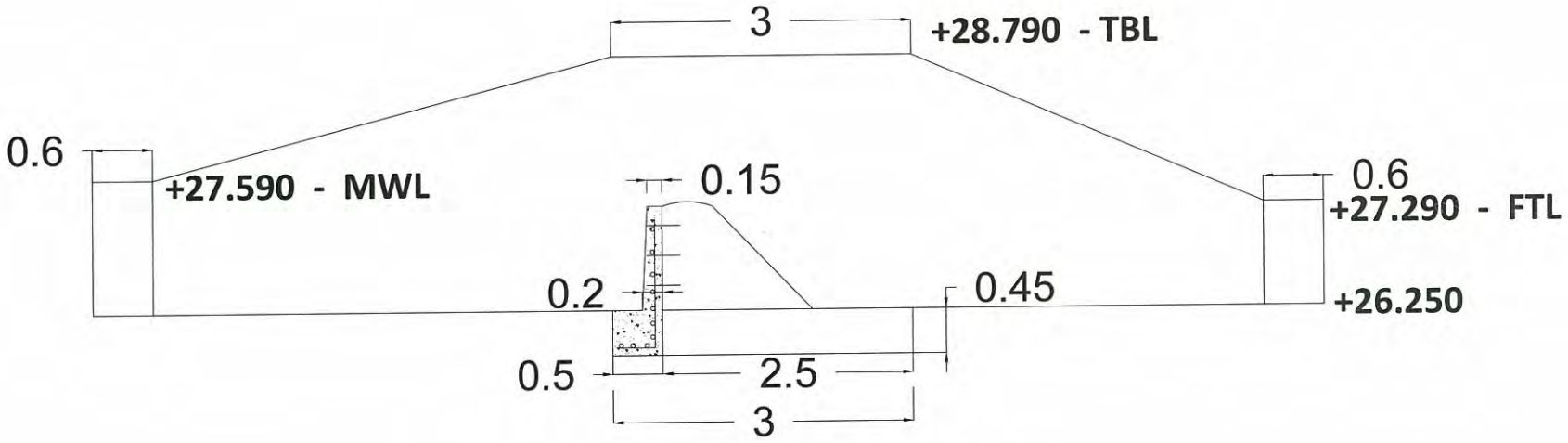
Proposed Repair to Abutment, Wings, Return, Apron,Skin Wall, Cutoff Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF SETHILPAKKAM ANICUT



SECTION AT A - B

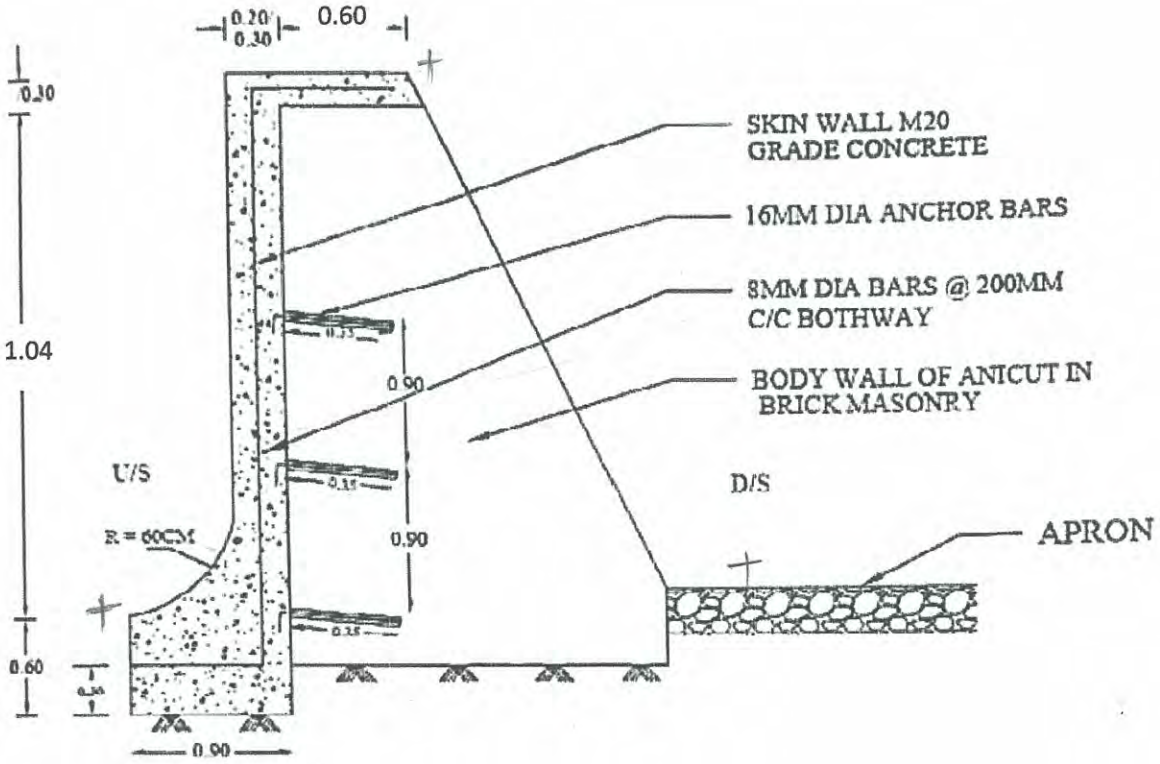
Proposed Repair to Abutment, Wings, Return, Apron,Skin Wall, Cutoff Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

3. SETHILPAKKAM ANICUT :-



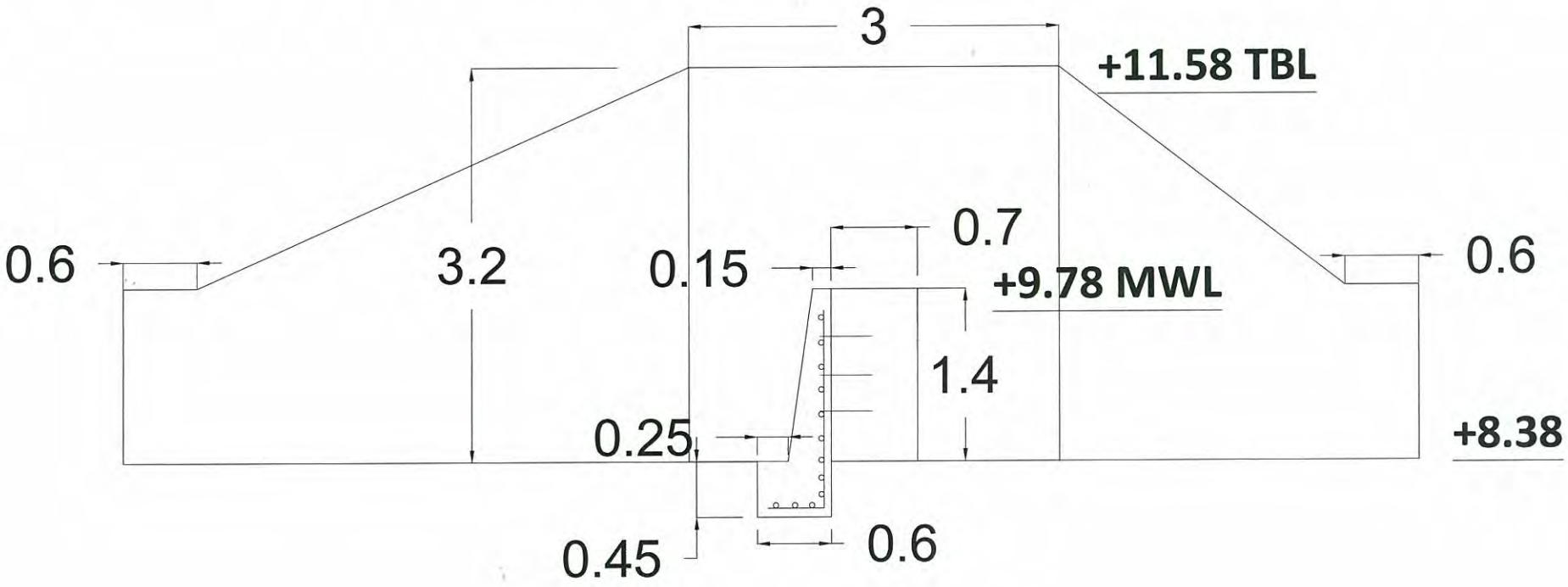
- Drill-holes of 50 mm diameter should be drilled at about 5 degree inclination downwards for ease of filling these holes with 1:2 cement-sand mortar.
- Joints on U/s surface to be raked to 25 mm depth, thoroughly cleaned and filled with mortar.
- Horizontal spacing, of Drill-holes (along the length of anicut) be kept at 1.0 m / 1.2 m.
- Joints, exhibiting loose mortar and / hollow joints in the Downstream surface of weir should also be raked to 25 mm depth, thoroughly cleaned and filled with mortar.

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF SANAPUTHUR ANICUT



SECTION AT A - B

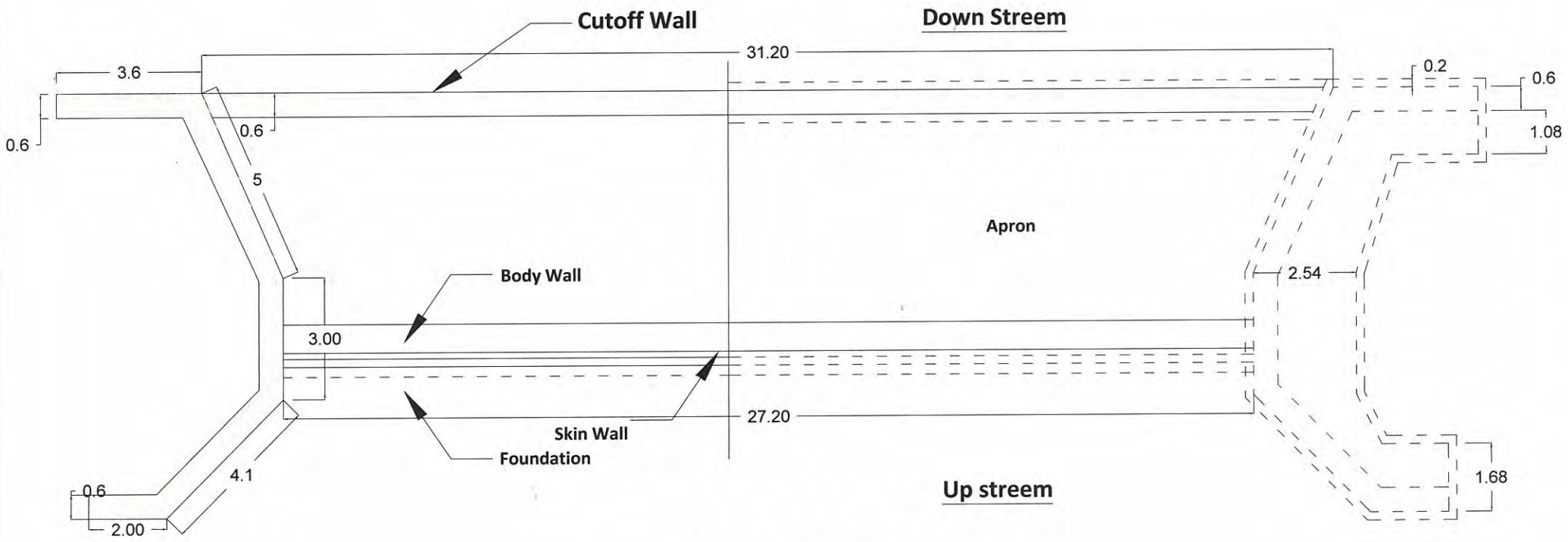
Proposed Repair to Abutment, Wings, Return, Apron,Skin Wall, Cutoff Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavarainettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

PROPOSED REPAIR OF SANAPUTHUR ANICUT



HALF PLAN AT TOP AND BOTTOM

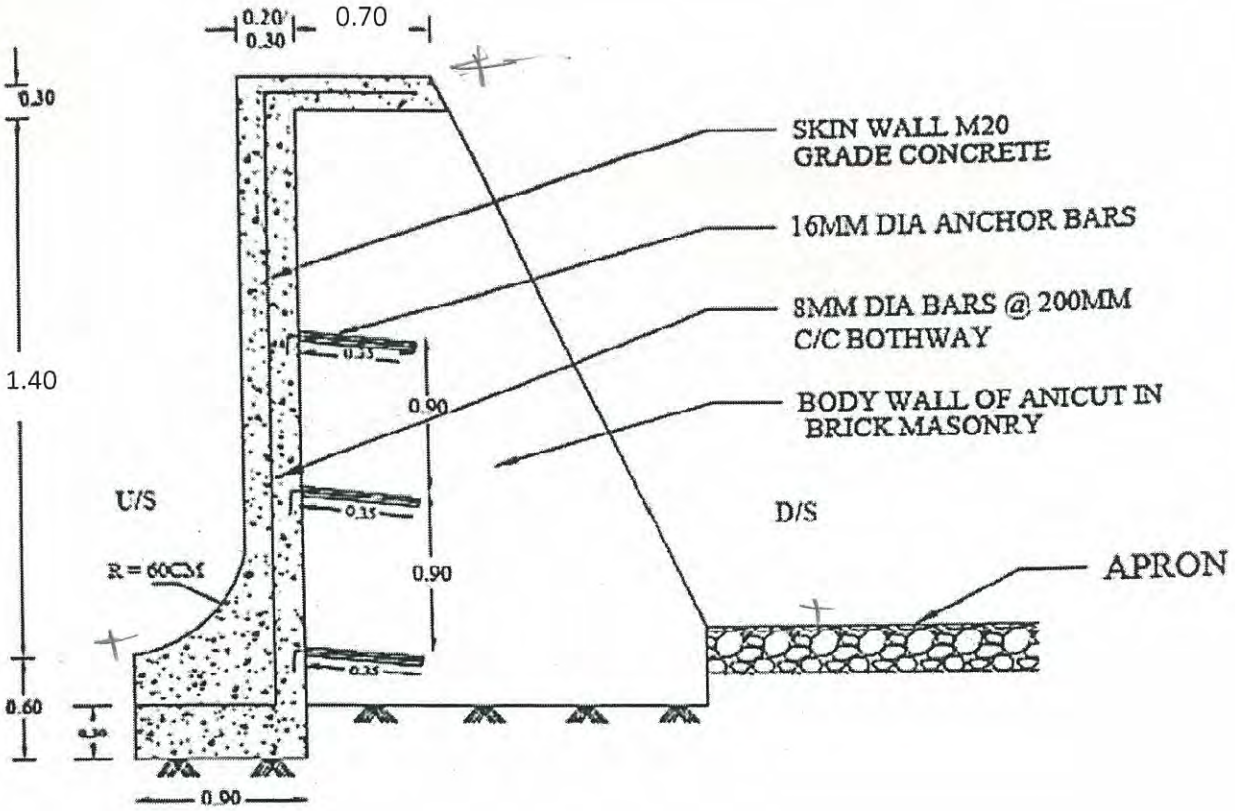
Proposed Repair to Abutment, Wings, Return, Apron,Skin Wall, Cutoff Wall

ASSISTANT ENGINEER, PWD, WRO
Lakshminaram Anicut Section,

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

4. SANAPUTHUR ANICUT :-



- Drill-holes of 50 mm diameter should be drilled at about 5 degree inclination downwards for ease of filling these holes with 1:2 cement-sand mortar.
- Joints on U/s surface to be raked to 25 mm depth, thoroughly cleaned and filled with mortar.
- Horizontal spacing, of Drill-holes (along the length of anicut) be kept at 1.0 m / 1.2 m.
- Joints, exhibiting loose mortar and / hollow joints in the Downstream surface of weir should also be raked to 25 mm depth, thoroughly cleaned and filled with mortar.

2/2/21
ASSISTANT ENGINEER, PWD, WRO
Lakshmipuram Anicut Section,
Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

Executive Engineer, P.W.D.,
Araniyaru Basin Division,
Chepauk, Chennai-5.

TAMILNADU IRRIGATION AGRICUTURE MODERNIZATION PROJECT

Phase – III Gummidipoonidi sub Basin

Certificate for weir Discharge and Earth fill Quantities.

1. The Rainfall intensity Considered for the calculation of Discharge through the Existing weir is the actual Maximum one day Rainfall occurred since 1991.
2. The Earth fill provided in the cost estimate are worked by superimposing the proposed profile on the existing cross section and with cut benches / serrations as provided in the LS and CS drawings enclosed in the Plan volume – Gummidipoondi sub Basin

Certified that, the above details are correct to the best of my knowledge.

Assistant Engineer, PWD/WRD.,
Lakshmipuram Anicut Section,
Kavaraipettai

Assistant Executive Engineeer, PWD/WRD.,
Araniyar Basin Sub Division,
Ponneri

Executive Engineer, PWD/WRD.,
Araniyar Basin Division,
Chepauk, Chennai - 5

Superintending Engineer, PWD, WRD.,
Palar Basin Circle,
Chepauk, Chennai-5.

Chief Engineer, PWD, WRD.,
Chennai Region ,
Chepauk, Chennai-5.

3.2.2021

PUBLIC WORKS DEPARTMENT
WATER RESOURCES DEPARTMENT

From

Er.S.Shanthi M.E.,
Superintending Engineer, PWD
Designs Circle, WRD
Chennai 600 005.

To

The Chief Engineer, PWD,
Chennai Region,
Chepauk,
Chennai.

Lr.No: / SE(D)/AEE 1/T 1 /F. /2020/ dated : .12.2020

Sir,

Sub: TNIAM Project – Phase III DPR – Gummidipoondi Sub basin - Technical Review Comments given by Mr.R.K. Malhotra, Consultant, World Bank – Revised Design Flood – Adequacy of length of weir for 11 Tanks checked – Communicated - reg.

Ref: 1. Engineer-in-Chief, WRD& Chief Engineer (GI), PWD, Chennai Lr.No. TNIAMP/F142/Phase III/2019/Dt. 10.11.2020.
2. Chief Engineer, Chennai Region, PWD., WRD., Chennai Lr. No. OT3/AE4/TNIAMP/Phase III/Adequacy- Gummidipoondi/2020 /dt.21.12.2020

In the reference 2nd cited the Chief Engineer, Chennai Region has sent the Hydraulic particulars of the following 11 Nos. of tanks under Gummidipoondi sub Basin along with the calculations for the Maximum flood discharge based on rainfall intensity, for checking the adequacy of the existing weirs.

1. Amaramedu Parukkeri Tank
2. Amirthamangalam Tank
3. Aramani Tank
4. Budhur Anicut Thangal
5. Chinna Bommanjikulam Tank
6. Periya Bommanjikulam Tank
7. Sedhilpakkam Tank
8. Eguvarpayalam Odaperi
9. Elavoor Hissa Kattu Thangal
10. Poovalai Large Tank
11. Thervali Thamarai Tank

On scrutiny of the details furnished by the Chief Engineer, Chennai Region it is observed that the length of the weirs for the above 11 Tanks under Gummidipoondi Sub Basin is found to be sufficient to dispose the discharge based on the rainfall intensity as furnished in Annexure 1.

Encl.: Annexure

For **Superintending Engineer, PWD**
Designs Circle, WRD., Chennai - 5.

29/12

TN IAMP - PHASE III

ADEQUACY CHECK OF LENGTH OF WEIRS FOR THE TANKS UNDER GUMMIDIPOONDI SUB BASIN

S. No.	Name of Tank	TBL in m	MWL in m	FTL in m	Head over crest in m	Discharge based on rainfall intensity in cusecs (as furnished by the Chief Engineer, Chennai Region)	Existing Weir		Remarks
							Length of weir in m	Discharching capacity in Cusecs	
1	Amaramedu Parukkeri Tank	31.470	30.550	30.250	0.300	37.79	14.00	140.20	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity
2	Amirthamangalam Tank	31.700	30.780	30.480	0.300	219.66	21.00	323.48	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity
3	Aramani Tank	31.540	30.580	30.000	0.580	243.67	32.60	877.22	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity

4	Budhur Anicut Thangal	36.900	35.400	35.100	0.300	162.80	14.00	396.23	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity
5	Chinna Bommanjikulam Tank	37.580	36.600	35.050	1.550	404.36	14.50	410.36	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity
6	Periya Bommanjikulam Tank	32.550	31.650	31.200	0.450	209.06	13.60	250.03	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity
7	Sedhilpakkam Tank	28.660	27.740	27.290	0.450	384.58	42.05	773.39	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity
8	Eguvarpayalam Odaperi	17.070	16.150	15.290	0.860	1033.67	114.30	5553.28	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity

9	Elavoor Hissa Kattu Thangal	4.070	3.150	2.660	0.490	122.90	22.90	478.51	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity
10	Poovalai Large Tank	16.800	15.800	15.200	0.600	856.39	36.00	1019.19	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity
11	Thervali Thamarai Tank	13.870	12.960	12.340	0.620	230.96	9.20	273.69	Existing length of surplus weir is sufficient to carry the discharge based on Rainfall intensity

29/12/12

For **Superintending Engineer, PWD.,**
Designs Circle, WRD.,
Chepauk, Chennai-600 005.

29/12

Amaramebdu Parukkeri Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient = 1

I is Rainfall intensity (mm/h) = 10.70 mm/hour

A is the Catchment area in Sq.Km = 0.36 Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 0.36

Q = 1.08 Cumescs

Maximum flood discharge, Q = 38.09 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 102.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Amarambedu Parukkeri Highest Rainfall Detail : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

Asst. Engineer, PWD.,
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Ponneri.

Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Amirthamangalam Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient	=	1
I is Rainfall intensity (mm/h)	=	10.7 mm/hour
A is the Catchment area in Sq.Km	=	2.09 Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 2.09

Q = 6.26 Cumescs

Maximum flood discharge, Q = 221.12 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 658.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Amirthamangalam tank Highest Rainfall Detail : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

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Araniyar Basin Division,
Chepauk, Chennai - 5.

Aramani Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient	=	1
I is Rainfall intensity (mm/h)	=	10.70 mm/hour
A is the Catchment area in Sq.Km	=	2.32 Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x2.32

Q = 6.95 Cumescs

Maximum flood discharge, Q = 245.46 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 430.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Aramani Tank Highest Rainfall Detall : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

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Ponneri.

Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Budhur Anicut Thangal Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient	=	1
I is Rainfall intensity (mm/h)	=	10.70 mm/hour
A is the Catchment area in Sq.Km	=	1.55 Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 1.55

Q = 4.64 Cumescs

Maximum flood discharge, Q = 163.99 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 625.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Budhur Anicut Thangal Highest Rainfall Detall : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

Asst. Engineer, PWD.,
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Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Chinna Bommanjikulam Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient = 1

I is Rainfall intensity (mm/h) = 10.70 mm/hour

A is the Catchment area in Sq.Km = 3.85

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 3.85

Q = [illegible] Cumescs 11.45

Maximum flood discharge, Q = [illegible] **cusecs** 404.42

Design Discharge (as Per Hydraluic Particulaars) (Q) = **633.00 Cusecs**

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Chinna Bommajikulam Highest Rainfall Detall : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

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Ponneri.

Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Periya Bommajikulam Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient	=	1	
I is Rainfall intensity (mm/h)	=	10.70	mm/hour
A is the Catchment area in Sq.Km	=	1.99	Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 1.99

Q = 5.96 Cumescs

Maximum flood discharge, Q = 210.54 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 685.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Periya Bommajikulam Highest Rainfall Detall : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

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Araniyar Basin Sub division,
Ponneri.

Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Sedhilpakkam Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient	=	1
I is Rainfall intensity (mm/h)	=	10.70 mm/hour
A is the Catchment area in Sq.Km	=	3.66 Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 3.66

Q = 10.97 Cumescs

Maximum flood discharge, Q = 387.23 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 730.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Sedhilpakkam tank Highest Rainfall Detail : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

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Ponneri.

Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Eguvarpayalam Odaperi Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient	=	1	
I is Rainfall intensity (mm/h)	=	10.70	mm/hour
A is the Catchment area in Sq.Km	=	9.84	Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 9.84

Q = 29.48 Cumescs

Maximum flood discharge, Q = 1041.08 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 3708.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Eguvarpalaym Odaperi Highest Rainfall Detall : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

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Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Elavoor Hissa Kattu Thangal Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient	=	1	
I is Rainfall intensity (mm/h)	=	10.70	mm/hour
A is the Catchment area in Sq.Km	=	1.17	Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 1.17

Q = 3.51 Cumescs

Maximum flood discharge, Q = 123.79 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 302.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Elavoor Hissa Kattu Thangal Highest Rainfall Detall : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

Asst. Engineer, PWD.,
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Kavarapettai

Asst. Exe. Engineer, PWD.,
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Ponneri.

Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Poovalai Large Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient = 1

I is Rainfall intensity (mm/h) = 10.70 mm/hour

A is the Catchment area in Sq.Km = ... Sq.Km 8.152

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x ~~12.16~~ 8.152

Q = ... Cumescs 24.24

Maximum flood discharge, Q = ... **cusecs** 856.32.

Design Discharge (as Per Hydraluic Particulaars) (Q) = 1743.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Poovalai Large Tank Highest Rainfall Detall : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

Asst. Engineer, PWD.,
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Ponneri.

Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

Thervali Thamarai Tank Weir Maximum Flood Discharge

Rational Formula for small catchments having time of concrentration (tc) upto 1 hour or catchment area less than 25 Sq km.

Maximum flood discharge, Q = 0.278 C I A m3 / sec

where,

C is Runoff Coefficient =	1	
I is Rainfall intensity (mm/h) =	10.70	mm/hour
A is the Catchment area in Sq.Km =	2.20	Sq.Km

Maximum flood discharge, Q = 0.278 C I A m3 / sec

Q = 0.278 x 1 x 10.70 x 2.20

Q = 6.59 Cumescs

Maximum flood discharge, Q = 232.76 cusecs

Design Discharge (as Per Hydraluic Particulaars) (Q) = 249.00 Cusecs

Hence, maximum Flood Discharge is less than the Design Discharge so it is Safe.

Thervali Thamari Highest Rainfall Detall : (Gummidipoondi Rain Gauge Station)

Year	Date of Highest Rainfall Recorded	Rainfall in mm/deg
1991	12.14.1991	91.87
1998	18.11.1998	38.00
2004	20.09.2004	135.00
2005	**28.10.2005**	**257.00**
2006	13.11.2006	151.00
2008	27.11.2008	125.00
2010	07.11.2010	170.00
2015	15.11.2015	220.00

Asst. Engineer, PWD.,
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Ponneri.

Executive Engineer, PWD.,
Araniyar Basin Division,
Chepauk, Chennai - 5.

HYDRAULIC PARTICUALRS

1	Name of Tank	:	Amarambedu Parikkeri
2	Catchmant Area in Sq.km	:	0.18 (sq.km)
3	F.T.L. in Metre	:	30.250 m
4	M.W.L. in Metre	:	30.550 m
5	T.B.L. in Metre	:	31.470 m
6	Length of Bund in Metre	:	755.00 m
7	Water Spread area in Hectare	:	7.00 Ha
8	Capacity in Mcm	:	0.03(mcm) /1.05mcft
9	Depth of storage in Metre	:	1.150 m
10	No.of Sluice	:	3 Nos
11	Register Ayacut	:	40.660 Ha
12	No.of weir and Length metre	:	1 (14.00 m)
13	Maximum discharge in cusec.	:	102.00 cusec
14	Inflow from	:	Amarambedu tank
15	Surplus to	:	Panjalai Madhuv
16	Lowest Sill		29.100

ASSISTANT ENGINEER, PWD, WRO
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Kavaraipettai - 601 206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

HYDRAULIC PARTICUALRS

1	Name of Tank	:	Amirthamangalam Tank
2	Catchmant Area in Sq.km	:	2.09 (sq.km)
3	F.T.L. in Metre	:	30.480 m
4	M.W.L. in Metre	:	30.880 m
5	T.B.L. in Metre	:	31.700 m
6	Length of Bund in Metre	:	1930.00 m
7	Water Spread area in Hectare	:	18.00 Ha
8	Capacity in Mcm	:	0.11 (mcm) /3.88 mcft
9	Depth of storage in Metre	:	1.750 m
10	No.of Sluice	:	2 Nos
11	Register Ayacut	:	46.140 Ha
12	No.of weir and Length metre	:	1 (21.00 m)
13	Maximum discharge in cusec.	:	658.00 cusec
14	Inflow from	:	Catchment
15	Surplus to	:	Vanimalli Tank
16	Lowest Sill		28.730

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Ponneri - 601 204.

HYDRAULIC PARTICUALRS

1	Name of Tank	:	Aramani Tank
2	Catchmant Area in Sq.km	:	1.52 (sq.km)
3	F.T.L. in Metre	:	30.000 m
4	M.W.L. in Metre	:	30.580 m
5	T.B.L. in Metre	:	31.540 m
6	Length of Bund in Metre	:	540.00 m
7	Water Spread area in Hectare	:	16.00 Ha
8	Capacity in Mcm	:	0.22 (mcm) /7.76mcft
9	Depth of storage in Metre	:	2.940 m
10	No.of Sluice	:	2 Nos
11	Register Ayacut	:	48.220 Ha
12	No.of weir and Length metre	:	1 (32.60 m)
13	Maximum discharge in cusec.	:	430.00 cusec
14	Inflow from	:	Catchment
15	Surplus to	:	Kollanur
16	Lowest Sill		27.060

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Lakshmi... ...icut Section,
...206.

Assistant Executive Engineer PWD / WRD
Araniyar Basin Sub Division
Ponneri - 601 204.

HYDRAULIC PARTICUALRS

1	Name of Tank	:	Budur Anicut Thangal
2	Catchmant Area in Sq.km	:	1.550 (sq.km)
3	F.T.L. in Metre	:	15.000 m
4	M.W.L. in Metre	:	15.600 m
5	T.B.L. in Metre	:	16.800 m
6	Length of Bund in Metre	:	950.00 m
7	Water Spread area in Hectare	:	19.00 Ha
8	Capacity in Mcm	:	0.25 (mcm) /8.82mcft
9	Depth of storage in Metre	:	1.250 m
10	No.of Sluice	:	1 Nos
11	Register Ayacut	:	75.270 Ha
12	No.of weir and Length metre	:	1 (14.00 m)
13	Maximum discharge in cusec.	:	625.00 cusec
14	Inflow from	:	Thervazhi kandigai
15	Surplus to	:	Ezhukannu Bridge
16	Lowest Sill		33.300

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Ponneri - 601 204.

HYDRAULIC PARTICUALRS

1	Name of Tank	:	Chinna Bommanjikulam Tank
2	Catchmant Area in Sq.km	:	3.85(sq.km)
3	F.T.L. in Metre	:	35.050 m
4	M.W.L. in Metre	:	35.650 m
5	T.B.L. in Metre	:	36.580 m
6	Length of Bund in Metre	:	690.00 m
7	Water Spread area in Hectare	:	9.00 Ha
8	Capacity in Mcm	:	0.05(mcm) /1.76mcft
9	Depth of storage in Metre	:	1.620 m
10	No.of Sluice	:	2 Nos
11	Register Ayacut	:	46.350 Ha
12	No.of weir and Length metre	:	2 (14.50 m)
13	Maximum discharge in cusec.	:	633.00 cusec
14	Inflow from	:	Catchment
15	Surplus to	:	Madarpakkam
16	Lowest Sill		33.450

18/12/20

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18/12/20

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Araniyar Basin Sub Division
Ponneri - 601 204.

HYDRAULIC PARTICUALRS

1	Name of Tank	:	Periya Bommanjikulam Tank
2	Catchmant Area in Sq.km	:	1.99 (sq.km)
3	F.T.L. in Metre	:	31.200 m
4	M.W.L. in Metre	:	31.650 m
5	T.B.L. in Metre	:	32.550 m
6	Length of Bund in Metre	:	450.00 m
7	Water Spread area in Hectare	:	8.00 Ha
8	Capacity in Mcm	:	0.06(mcm) /2.11mcft
9	Depth of storage in Metre	:	1.450 m
10	No.of Sluice	:	2 Nos
11	Register Ayacut	:	62.230Ha
12	No.of weir and Length metre	:	1 (13.60 m)
13	Maximum discharge in cusec.	:	685.00 cusec
14	Inflow from	:	Catchment
15	Surplus to	:	Madarpakkam
16	Lowest Sill		28.110

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HYDRAULIC PARTICUALRS

1	Name of Tank	:	Sedilpakkam Tank
2	Catchmant Area in Sq.km	:	0.88(sq.km)
3	F.T.L. in Metre	:	27.290 m
4	M.W.L. in Metre	:	27.740 m
5	T.B.L. in Metre	:	28.660 m
6	Length of Bund in Metre	:	725.00 m
7	Water Spread area in Hectare	:	26.00 Ha
8	Capacity in Mcm	:	0.32(mcm) /11.30mcft
9	Depth of storage in Metre	:	1.070 m
10	No.of Sluice	:	1 Nos
11	Register Ayacut	:	44.900 Ha
12	No.of weir and Length metre	:	1 (26.80,15.25 m)
13	Maximum discharge in cusec.	:	730.00 cusec
14	Inflow from	:	Catchment
15	Surplus to	:	Manellur large Tank
16	Lowest Sill		26.220

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HYDRAULIC PARTICUALRS

1	Name of Tank	:	Thervali Thamarai Tank
2	Catchmant Area in Sq.km	:	1.22 (sq.km)
3	F.T.L. in Metre	:	12.340 m
4	M.W.L. in Metre	:	12.960 m
5	T.B.L. in Metre	:	13.870 m
6	Length of Bund in Metre	:	457.00 m
7	Water Spread area in Hectare	:	4.00 Ha
8	Capacity in Mcm	:	0.02(mcm) /0.70mcft
9	Depth of storage in Metre	:	1.210 m
10	No.of Sluice	:	2 Nos
11	Register Ayacut	:	48.900 Ha
12	No.of weir and Length metre	:	1 (9.20 m)
13	Maximum discharge in cusec.	:	249.00 cusec
14	Inflow from	:	Catchment
15	Surplus to	:	Rettamebdu Tank
16	Lowest Sill		11.130

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HYDRAULIC PARTICUALRS

1	Name of Tank	:	Elavoor Hissa Kattu thangal
2	Catchmant Area in Sq.km	:	1.17 (sq.km)
3	F.T.L. in Metre	:	2.660 m
4	M.W.L. in Metre	:	3.150 m
5	T.B.L. in Metre	:	4.070 m
6	Length of Bund in Metre	:	1382.00 m
7	Water Spread area in Hectare	:	31.000 Ha
8	Capacity in Mcm	:	0.17(mcm) /6.00mcft
9	Depth of storage in Metre	:	1.520 m
10	No.of Sluice	:	2 Nos
11	Register Ayacut	:	80.000 Ha
12	No.of weir and Length metre	:	1 (22.90 m)
13	Maximum discharge in cusec.	:	302.00 cusec
14	Inflow from	:	
15	Surplus to	:	
16	Lowest Sill		1.150

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HYDRAULIC PARTICUALRS

1	Name of Tank	:	Eguvarpalayam Odaperi
2	Catchmant Area in Sq.km	:	8.54 (sq.km)
3	F.T.L. in Metre	:	15.290 m
4	M.W.L. in Metre	:	16.150 m
5	T.B.L. in Metre	:	17.070 m
6	Length of Bund in Metre	:	685.00 m
7	Water Spread area in Hectare	:	24.00 Ha
8	Capacity in Mcm	:	0.40 (mcm) /14.12mcft
9	Depth of storage in Metre	:	1.940 m
10	No.of Sluice	:	1 Nos
11	Register Ayacut	:	100.030 Ha
12	No.of weir and Length metre	:	2 (90.00 m,24.30m)
13	Maximum discharge in cusec.	:	3708.00 cusec
14	Inflow from	:	
15	Surplus to	:	
16	Lowest Sill		13.350

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HYDRAULIC PARTICUALRS

1	Name of Tank	:	Poovalai large Tank
2	Catchmant Area in Sq.km	:	5.62 (sq.km)
3	F.T.L. in Metre	:	15.200 m
4	M.W.L. in Metre	:	15.800 m
5	T.B.L. in Metre	:	16.800 m
6	Length of Bund in Metre	:	1005.00 m
7	Water Spread area in Hectare	:	33.00 Ha
8	Capacity in Mcm	:	0.33(mcm) /11.65mcft
9	Depth of storage in Metre	:	3.100 m
10	No.of Sluice	:	1 Nos
11	Register Ayacut	:	80.390 Ha
12	No.of weir and Length metre	:	2 (22.00,14.00 m)
13	Maximum discharge in cusec.	:	1743.00 cusec
14	Inflow from	:	
15	Surplus to	:	
16	Lowest Sill		12.100

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Sl. No.	Name of Tank	Length in m	Rehabilitation of tank bund (Earthwork) in m³.
1	Amarambedu Parikkeri	755	7857.00
2	Amarambedu Tank	1060	11200.00
3	Amirthamangalam tank	1930	19730.00
4	Aramani Tank	540	5470.00
5	Budur Anicut Thangal	950	10090.00
6	Chinna Bommanjikulam Tank	690	7230.00
7	Kanalur Pedu Eri	1402	14446.00
8	Periya Bommanjikulam Tank	450	4690.00
9	Pondavakkam PuduTank	720	7368.00
10	Sedilpakkam Tank	725	7006.00
11	Edur Tank	1250	12960.00
12	Thervoy Kandigai Chitteri	1250	13020.00
13	Vanamalli Tank	1200	12320.00
14	Elavoor Hissa Kattu Thangal	1382	14523.00
15	Elavoor Katteri Tank	630	6540.00
16	Elavur Large Tank	1204	12270.00
17	Eguvarpalayam Odaperi	685	6190.00
18	Narasingapuram Tank	640	6458.00
19	Peria Natham Thattan Tank	381	3992.00
20	Melapakkam Pettai Cheruvu	795	8190.00
21	Poovalai Large Tank	1005	10400.00
22	Thervali Thamarai Tank	457	4804.00
	Total Qty		206754.00 m³.

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Araniyaru Basin Division,
Chepauk, Chennai-5.

SI.NO	Description	Desilting Quantity in m^3.
1	Anicut suppy channel (4 Nos) - Length 14000.00 m	122400
2	Tank supply channel (22 Nos) - Length 27000.00 m	74100
		196500 M^3

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